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6 February 1984

# USSR Report

AGRICULTURE

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6 February 1984

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## POST HARVEST CROP PROCESSING

### PROBLEMS IN FRUIT AND VEGETABLE DISTRIBUTION SYSTEM IN UKRAINE

#### Kiev Vegetable Marketing Problems

Kiev SIL'S'KI VISTI in Ukrainian 4 Aug 83 p 2

[Article by V. Bilenko, head of volunteer agriculture department, Kiyev-Svyatoshinskiy Rayon People's Control Committee, Kiev Oblast: "How Can Kiev-Grown Cabbage Get Onto the Retail Counter?"]

[Text] Due to incompetence on the part of the specialists at the UkSSR Ministry of the Fruit and Vegetable Industry, farms in the Kiev area are forced to market their vegetables thousands of kilometers from Kiev, and yet vegetables are presently being hauled from other oblasts to the stores in the republic capital.

Recently, at the Sovkhoz imeni 60th Anniversary of the Great October Socialist Revolution, I met H. F. Prykhod'ko, a truck driver from Motor Transport Enterprise 0901, which belongs to the UkSSR Ministry of the Fruit and Vegetable Industry. He had just returned from a great distance, completing a run of hundreds of kilometers -- he had been hauling sovkhoz vegetables, including 6,829 kilograms of tomatoes.

"What is the reason for this?" I asked S. I. Remez, that farm's deputy manager for commercial affairs. "After all, there is great demand in Kiev for this produce. People are lined up in the vegetable stores to buy tomatoes."

"For tomatoes which have arrived from the South," replied Serhiy Ivanovych, "while we must haul our tomatoes outside the republic, inasmuch as the Kiev Zhovtnevyi Wholesale-Retail Fruit and Vegetable Combine, with which this sovkhoz signed a supply contract at the beginning of the year, will not take tomatoes."

"What don't you accept tomatoes?" I asked O. P. Pastarnak, laboratory head at the Zhovtnevyi Fruit and Vegetable Combine, and V. P. Saprykin, spokesman for the Kiyevplodoovoshchkhov Association.

A brief explanation: F. S. Bronepol's'kyy, head of the association's marketing department, has prohibited laboratory analysis of this produce item.

Unfortunately this kind of thing is happening not only with tomatoes. On 27 June, for example, V. P. Obertyns'kyi, deputy manager for commercial affairs of the Tarasivs'kyi Sovkhoz, went to the Kiyev-Svyatoshynskiy Rayon state inspectorate for agricultural produce purchases and quality and reported with deep concern that they had grown a fine early cabbage crop on their farm, but that the management of the Kiev's Moskovskiy Fruit and Vegetable Combine was refusing to take the cabbage crop.

We visited a produce warehouse located in Kiyev-Svyatoshynskiy Rayon, not far from the Tarasivs'kyi Sovkhoz. We asked L. F. Mishchenko, head of the produce hauling and sales department: "Why are you failing to honor your contract?"

"Because," the specialist replied with agitation in his voice, "every day cabbage is coming into our warehouse and refrigerated storage space from the republic's southern oblasts. It is being hauled both by railcar and truck. A large percentage is not fit to be marketed."

I learn that only half of the 1,500 tons of cabbage which was ordered by the Ministry of the Fruit and Vegetable Industry in other oblasts of this republic for the stores of Kiev is of decent quality.

But why is it that the cabbage crop produced on the farms in the vicinity of the Ukrainian capital, of a cabbage variety tailored to the area, had to be marketed, beginning on 25 June, elsewhere than in Kiev Oblast?

There is a reason for the precise date. The fact is that at the beginning of June the management of the Kievgorplodoovoshchtorh Association learned that between the 11th and 20th of that month Kiev could experience interruptions in supply of cabbage to the general public. This conclusion was based on a crop survey on farms in the vicinity of Kiev, where this crop usually is ready for harvesting toward the end of June.

As was stated by M. P. Malashenko, deputy head of the association's hauling and processing department, measures were taken to prevent the shortage. A number of farms in Crimean, Odessa, Kherson, and other southern oblasts in the republic, according to supply contracts, were to ship the ordered cabbages to the Kiev trade network. The first consignments were to arrive on 15 June, not on 20-25 June, as actually happened. Briefly stated, railcars and refrigerated vans carrying Crimean cabbage arrived precisely when large-scale cabbage harvesting began on Kiev's nearby farms. In addition, the quality of the cabbage hauled in from the South, due to the fact that it had been picked late, left much to be desired: it was far inferior to the local product.

All this is a consequence of the shortsightedness and indifference on the part of the various services of the UkSSR Ministry of the Fruit and Vegetable Industry, which had failed to address the problem which arose. A result was a letter directed to Comrade Lazarovych, general manager of the Kievgorplodoovoshchtorh Association, Comrade Shcherbenko, general manager of the Kievplodoovoshchkhov Association, and Comrade Frolov, deputy chairman of the Kiev city executive committee, dated 14 June 1983, No 3-2-8/207-06, which read as follows: "A difficult situation has developed in the city of Kiev pertaining to

supplying cabbage to the general public. In the last 3 days 90 tons have come in from the oblast's farms, resulting in stores running out of cabbage and in justified shopper complaints. In connection with the fact that sovkhoses of the Kievplodoovoshchkhov Association will in the immediate future not be supplying Kiev with the requisite quantity of cabbages, you are immediately to instruct suppliers to ship it out immediately."

As is evident from the text of this letter, Deputy Minister O. D. Yeremenko was disturbed by the developing situation. But note the date: a ministry official is sounding the alarm at the time when cabbage from the South was supposed to be appearing in the produce stores. Hence the consequences. In particular, the following rather curious fact: Comrade Bogdanov, deputy general manager of Kievplodoovoshchkhov, anticipating the desire of the managers of the Kiyev-Svyatoshinskiy farms to market their own produce, which incidentally was of rather high quality, added a note to his underlings on the ministry letter, a note which reads literally as follows: "Quote the contents to those managers who complain that they will not take their cabbages."

Not merely these facts alone merit comment. The problem of marketing hothouse cucumbers is becoming more difficult each year, for example. The rayon's sovkhoses delivered approximately 9,000 tons of them to Kiev trade organizations, which is significantly above target. A substantial quantity was sold outside the oblast. The Pushcha-Vodytsya Sovkhoz alone shipped 1,050 tons of cucumbers to various Soviet cities, including Murmansk Gortorg. In the opinion of this farm's marketing economist, V. Ya. Volovyk, in order to bring an end to difficulties in marketing vegetables it is essential to distribute produce in a prompt and timely manner among customers, who could take the entire crop on the basis of purchase contracts.

There is one other thing. The rayon's farms produced a good radish crop this year. With a Kiev sales target of 3,410 tons, however, 1,000 tons less than target was actually delivered. Almost half the crop was left unpicked, and subsequently plowed under. This was caused by the fact that in May, when local produce was already available, 1,400 tons of radishes were hauled to market in Kiev from Zaporozhye, Crimean, Odessa and Kherson oblasts.

#### Follow-Up Commentary to Bilenko Article

Kiev SIL'S'KI VISTI in Ukrainian 30 Aug 83 p 2

[UkSSR Ministry of the Fruit and Vegetable Industry response to article in SIL'S'KI VISTI: "How Can Kiev Cabbage Get Onto the Retail Counter?"]

[Text] A critical article on deficiencies in organizing the hauling of vegetables and potatoes by suburban-zone sovkhoses and their acceptance by Kiev trade organizations was published under the above title on the "Public Oversight" page (SIL'S'KI VISTI, No 177).

The board of the UkSSR Ministry of the Fruit and Vegetable Industry, we are informed by deputy ministry M. Terez, has acknowledged as unsatisfactory the performance of the Kievplodoovoshchkhov Association (general manager Shcherbenko) and its rayon associations regarding organization of harvesting, procurement,

and delivery of vegetables, plus the Kiev City Fruit and Vegetable Trade Association (general manager Lazarovych) and that city's wholesale-retail combines in vegetable transport, acceptance, and trade.

Headquarters staffs have been formed to give day-to-day direction and assistance to production and trade enterprises in organizing harvesting, procurement, hauling of and trade in vegetables and potatoes, said staffs to consist of ministry officials and representatives of Kiev party and soviet agencies, agroindustrial associations, sovkhozes, and wholesale-retail combines. At their weekly meetings, these staffs total up performance results by sovkhozes and trade enterprises in meeting produce hauling schedules and the state of service being provided to the public, as well as stating targets for the forthcoming period.

Ministry specialists have been assigned to monitor the operations of the retail trade network.

An additional seasonal retail network has been set up to improve service to the public, and measures are being taken to provide stores with sales personnel. More personnel and vehicles have been assigned from Kiev industrial enterprises for harvesting and hauling produce from the sovkhozes.

Presently approximately 2,000 tons of vegetables, more than 200 tons of potatoes, and 250 tons of fruits are entering the market each day, amounts which exceed the scheduled figures. Melon crops have begun to arrive on the market.

#### Misuse of Refrigerated Trucks

Kiev SIL'S'KI VISTI in Ukrainian 30 Aug 83 p 2

[Article, published under the heading "In the UkSSR People's Control Committee": "Utilize Refrigerated Trucks as Intended"]

[Text] An inspection and audit of the Kiev Republic and Lvov Motor Transport enterprises of the UkSSR Ministry of the Fruit and Vegetable Industry revealed facts of irresponsible attitude toward use of refrigerated trucks for hauling highly perishable farm produce.

At the Kiev Republic Motor Transport Enterprise, for example, only 35-40 percent of the available 126 refrigerated trucks are actually being used. Fresh vegetables, fruits, and grapes comprised less than half of the loads hauled in the last year and a half.

At the same time Kievplodoovoshchtorg organizations, which are serviced by the Republic Motor Transport Enterprise, received and shipped by rail more than 93,000 out of 122,000 tons of produce, involving the use of 1,500 railcars. In a number of instances produce has spoiled due to failure to make truck hauls.

The UkSSR Ministry of the Fruit and Vegetable Industry does not assign motor transport enterprises targets for refrigerated truck hauling of highly perishable produce. Nor is adequate attention focused on establishing contracts between transport enterprises and produce shippers as an important form of mutual responsibility for delivering loads.

Ministry and motor transport enterprise officials and specialists have failed to create the requisite conditions for high-quality servicing, maintenance and operation of refrigerated trucks. As a consequence, as of July of this year the refrigeration equipment on one out of every three such trucks was not in working order.

Because of lack of oversight and supervision, many drivers, especially during long hauls, arbitrarily alter their routes. During a period of 6 months almost half of all trucks arrived back at the garage from 2 to 12 days behind schedule. A total of 432 truck-days were lost.

The republic motor transport enterprise is failing to conduct an adequate effort to eliminate instances of exaggeration of performance figures upward and illegal charging at excessive rates for specially equipped trucks when used in hauling loads which do not require refrigeration.

There still occur instances of damage and loss of vegetables during hauling by specialized motor transport (this year claims totaling 13,900 rubles were filed against the motor transport enterprise). There occur gross violations of proper procedures in making out transport documents, and there is occurring overconsumption of fuel and lubricants.

In spite of the enumerated deficiencies, motor transport enterprise management personnel were paid approximately 34,000 rubles in bonuses for the first half of the year, including 4,400 rubles to top management officials.

The committee was notified that by order of the UkSSR Ministry of the Fruit and Vegetable Industry, S. I. Odinokov, head of the republic motor transport enterprise, A. F. Pivnyk, his deputy for operations, and B. D. Mel'nychuk, head of the ministry's production-transport administration, have been called on the carpet. Ministry of the Fruit and Vegetable Industry officials, however, have uncritically appraised the state of affairs pertaining to utilization of refrigerated trucks and have failed to condemn facts of gross violations of financial discipline, involving unwarranted payment of bonuses to managers and specialists, and have displayed an indulgent attitude regarding the matter of making the guilty parties financially liable.

The committee instructed Comrade Odinokov to take steps to have bonuses returned in the prescribed manner.

In partial compensation for the losses sustained by the state as a consequence of illegally paid bonuses to management personnel as well as overconsumption of fuel, the committee has levied fines on Comrades Odinokov and Pivnyk in the amount of one month's salary each.

The attention of S. A. Panasyuk, UkSSR deputy minister of the fruit and vegetable industry, has been drawn to the fact of inadequate oversight and supervision on the part of the ministry edifice pertaining to utilization of the refrigerated truck fleet within the system.

It has been proposed that the ministry take immediate steps to correct the deficiencies and violations revealed in the course of the inspection.

#### Meeting on Problems in Fruit and Vegetable Industry

Kiev SIL'S'SKI VISTI in Ukrainian 19 Nov 83 p 2

[Article, published under the heading "Party Affairs: Reports and Elections," by SIL'S'SKI VISTI correspondent M. Lysenko: "With High Demandingness: Communists of the Ministry of the Fruit and Vegetable Industry Have Analyzed Deficiencies in the Performance of the Industry Headquarters Staff at Report and Election Meeting"]

[Text] Vegetables and fruits have always grown in abundance in our republic. Unfortunately, however, they have not always reached the consumer. One of the reasons for this was a lack of coordination in the actions of the proprietors of orchards and truck farms on the one hand and the people in processing and marketing on the other. In order to put an end to the lack of coordination in this matter, several years ago a republic Ministry of the Fruit and Vegetable Industry was established, with the principal task of ensuring coordinated actions among the partners of the fruit and vegetable industry and, as an end result, a radical improvement in supply of fruits and vegetables to the public.

The new ministry was soon producing results: more stores were selling fruits and vegetables, and the quality of this produce improved. Nevertheless there still today is felt a shortage of fruits and vegetables in the trade network, and therefore on the table of the workers. In addition, production has declined this year in a number of vegetables, such as cabbage and carrots.

Why has this happened?

The search for answers to this question was the main topic of discussion at the party report and election meeting held recently at the UkSSR Ministry of the Fruit and Vegetable Industry.

"Reports and elections in party organizations constitute a survey of resources, a critical analysis of accomplishments, and an intent look into the future," party committee secretary V. D. Sal'nikov began his report.

There is plenty of manpower in the ministry party organization, the speaker continued: 164 Communists, almost all of whom possess higher education and organizing experience. The party committee is making every effort to enhance the role of Communists in ministry activities and to strengthen party influence on the work of all its subdivisions. Party member accountability reports are extensively practiced toward this end -- 89 of these were presented during the period under review. During this same time 8 general party meetings were held, as well as 30 party committee meetings. Topics discussed included the adoption of an industrial-method process of growing and harvesting vegetable crops, measures to increase material incentive for agricultural workers, and accelerated harvesting and storage of feeds....

As is evident from the ministry's practical experience, including the party committee accountability report, there is no shortage of measures and programs in the UkSSR Ministry of the Fruit and Vegetable Industry. Something else is lacking -- efficiency, prompt and thorough analysis of the state of affairs, and specificity in work activities. The same thing can be said about party committee activities. It has essentially ignored the most important thing -- the style of industry management and administration, and improvement of the forms and methods of party influence on production.

Party work constitutes first and foremost precision, demandingness, and firmness. But what kind of demandingness and firmness is it when over a period of 2 years the party committee has not brought up for discussion by party members the following items, for example: why is it that farms subordinate to the ministry, while possessing a strong material and technological foundation, are undersupplying thousands of tons of produce to the state, specifically who bears responsibility for this, and how can the situation be remedied?

There have been many discussions on this subject, but they have not been bolstered by immediate, practical action. In its place there is the appearance of businesslike efficiency or, in other words, attention to form with consequent detriment to content. The accountability report also contains certain elements of this.

"The new party committee membership must seriously reexamine their position in regard to an indulgent attitude, complacency, and radically revise their activities and ensure plan fulfillment in the coming year," stated the speaker.

The report does not specify exactly who has displayed complacency and an indulgent attitude. Is this not because the party committee itself was guilty? As we recall, in the course of the period under review it heard 89 party member accountability reports. These reports unquestionably dealt more with deficiencies than successes. But the party committee did not really question about these deficiencies a single one of the 89 persons presenting reports.

And yet there was plenty to ask about. Such as the situation developing at the ministry about which the following was stated in the accountability report: "We use up a great deal of paper, but efficiency of paper utilization is very poor. We must essentially learn to write concisely. Some of our officials have so surrounded themselves with documents that one cannot even approach them. But these documents contain a great deal of empty wordage."

The situation does not change for the better from confirmation of facts but from prompt, objective evaluation of these facts and effective conclusions. It is precisely this which the party committee is lacking. Take the following example. In May of this year ministry Communists were discussing the question of unity of word and deed, that is, the need to bolster good intentions with painstaking, hard work. As stated in the report, businesslike proposals were made on correcting the revealed deficiencies. How are these proposals being implemented? The party committee should have returned to this matter in due course. Almost 6 months have passed since May, but no such discussion has yet taken place. This unquestionably has also affected results -- this year's vegetable acreage has not been properly cared for, which has been one of the factors in the harvest shortfall.

The party committee must work much better, more efficiently and purposefully -- this thought was expressed by party members who took part in discussing the report. There was no complacency at the meeting -- everybody who took the floor spoke in an impassioned, well-reasoned manner, which indicates people's concern for the job which they have been assigned, for accomplishing the tasks which the party has assigned workers of the agroindustrial complex.

Party member N. P. Kasatkina, a main administration leading agronomist in the area of potato, vegetable, and melon crop production, took the floor: "One of the reasons for the vegetable harvest shortfall by our ministry's farms is a lack of adequate party oversight over the activities of the ministerial administrative machinery and organization of labor at the headquarters of this branch and locally," she stated. "The party committee should long since have focused attention on how the ministry subdivisions, including our main administration, are utilizing their manpower and on what the specialists are spending their time. We experts who are attached to this leading subdivision do not spend our time as much on our direct job duties -- organization of vegetable growing -- as with preparing progress reports, etc. For example, in the first 9 months of this year our main administration was given 30 assignments to prepare various papers for transportation officials, economists, and officials at other main administrations. When do we have time to deal with vegetables?"

Serious errors which complicate work coordination were stated by the main administration's supply chief, party member V. F. Bortnyk.

"There is a lack of proper organization in the area of distribution and utilization of available resources, in particular equipment for processing vegetables," he stated. "Due to a lack of coordination among the ministry's main administrations, a good deal of valuable equipment goes to those who do not order it, while those who are badly in need of equipment cannot promptly obtain it. Our main administration is primarily to blame here, but the party committee also should not be merely a passive observer -- it is high time to put matters straight."

The UkSSR minister of the fruit and vegetable industry, party member V. P. Lisitsin, took the floor.

"The ministry board and I personally do not deny our degree of blame for those mistakes which are occurring in our branch," the speaker stated. "Both the harvest shortfall and inadequate supply of vegetables to our working people are a result of unsatisfactory party work at the ministry as well as a lack of demandingness and at times a lack of frankness and firmness as well on the part of the party committee. It is painful for me, head of the ministry and a member of its party committee, to say this, but we must be objective and self-critical. The party committee must be very serious in its appraisal of the job performance of each and every party member, regardless of his position. This has many times not been the case, and therefore certain top ministry officials, including deputy ministers, have displayed a lack of discipline, passivity, and indifference toward performance of their assigned duties."

The speaker stated that the job performance of Deputy Minister M. P. Terez is an example of poor performance. When traveling on official business for the purpose of helping farmers do a better job of organizing cabbage growing, he did not even visit growing operations. He drew no conclusions from the patently poor situation regarding the growing of vegetables in Kiev Oblast and in other oblasts in this republic, although there were plenty of reasons for dissatisfaction with the vegetable growing situation.

Unfortunately these and other similar facts were not discussed at a meeting of the party committee or at party general meetings.

Party members V. M. Antonova, H. N. Korkh, Z. P. Tymchenko, L. I. Lonas, V. I. Tselinko, and M. S. Loskucheryavyy analyzed the performance of the ministry party committee and party organization in an acute manner and with implacability toward deficiencies. They emphasized that strengthening of labor discipline and follow-through, improving work with cadres, and creating a productive, businesslike atmosphere at the ministry should be primary-emphasis work agenda items for the newly-elected party committee. Appropriate thoughts in this regard were stated at the meeting by L. M. Man'kovs'kyi, sector chief in the agriculture and food industry department of the Ukrainian Communist Party Central Committee.

A decision aimed at radically improving party work at branch headquarters and at intensifying the campaign to carry out the national Food Program and the decisions of the 26th CPSU Congress was approved at the meeting.

3024

CSO: 1811/14

GREATER UTILIZATION OF BY-PRODUCTS OF OIL AND FAT INDUSTRY URGED

Moscow MUKOMOL'NO-ELEVATORNAYA I KOMBIKORMOVAYA PROMYSHLENNOST' in Russian No 11, Nov 83 pp 4-5

/Article by G. Pen'kov, chief technologist for Upraszchirmaslo of the USSR Ministry of the Food Industry: "More Extensive Use of By-Products of Oil and Fat Industry"/

/Text/ The carrying out of the Food Program is impossible in the absence of radical improvements in feed production and the USSR Ministry of the Food Industry is making a contribution towards solving this task.

Each year the oil and fat industry of the USSR Minpishcheprom /Ministry of the Food Industry/ obtains 4-4.5 million tons of oil-seed meal and oilcake, the principal high protein components of mixed feed. Future plans call for an increase in the production of oil-bearing seed and the production of 5.3-6.8 million tons of oil-seed meal and oilcake from such seed at oil and fat enterprises.

At the present time, the principal amount of oil-bearing raw materials is being processed using the progressive extraction method (forced pressing -- extraction) and thus the chief protein feed product being produced by the oil and fat industry, and in a large volume, is that of oil-seed meal.

The quality of the oil-seed meal and oilcake and the content and condition of the protein in them are determined to a large degree by the quality of the sunflower, cotton, soybean and other oil-bearing and technical crop seed that is processed. For example, a commission consisting of representatives of the USSR and Moldavian food industry ministries, scientific workers of the Seleksiya Institute in the Moldavian SSR and specialists from the mixed feed industry of Minzag /Ministry of Procurements/ for the Moldavian SSR established the fact that the oil-seed meal obtained from hybrid varieties of sunflower seed possesses a higher content of cellulose and a lower content (by 5-8 percent) of protein than the oil-seed meal obtained from conventional high oil content varieties of sunflowers. This means that when breeding oil-bearing crops an attempt must be made to achieve not only an increase in their cropping power and resistance against diseases, but also improvements in their oil content, in the quality structure of the oil and also in raising the protein content.

Very efficient methods are being undertaken in the interest of improving the quality of the oil-seed meal being produced. First of all, work is being carried out in connection with ensuring preservation of the seed following its arrival at an enterprise and prior to being unloaded in storehouses. In addition, it is being cleaned thoroughly prior to being made available for production operations. The technological processes are being carried out in regimes which ensure retention of the protein and improvements in the feed properties of the oil-seed meal. Towards this end, special types of equipment are being installed and a new type of solvent has been introduced for extracting the oil from the raw material -- Mark A gasoline of a hexane fraction.

A great amount of work has been carried out in connection with increasing the production of toasted oil-seed meal, that is, the introduction into operations at oil mills of a special moisture and heat treatment for oil-seed meal which will raise its feed properties by 10-15 percent. An improvement in the quality of oil-seed meal produced by the oil and fat industry by means of toasting ensures the replacement at enterprises on an extensive scale of screw conveyer evaporators by tank toasters. With more moderate heat regimes, the latter make it possible to remove gasoline from the oil-seed meal almost completely and to control better the moisture and heat treatment, in the interest of raising the feed value of the protein in the oil-seed meal and also the inactivation of the anti-nutrients in it -- ureasa, trypsin inhibitor, soyin in the soybean seed, gossypol in the cotton seed and so forth.

The capability of the installed toasters makes it possible to toast all of the soybean oil-seed meal and a considerable amount of the sunflower oil-seed meal. This capability is being increased constantly. At the Armavir Oil and Fat Combine, one of the first to have installed four toasters, up to 410 tons of high quality toasted sunflower oil-seed meal or 450 tons of soybean oil-seed meal are produced annually.

In the interest of raising the feed properties of oil-seed meal, the scientific research organizations of the USSR Minpishcheprom, USSR Minsel'khoz /Ministry of Agriculture/ and USSR Minzag established the feasibility of enriching it with fat by-products, for example special lipids and concentrates of calcium salts (up to 4 percent). The production of oil-seed meal and deliveries of it to mixed feed enterprises have been organized and are being increased annually at enterprises of USSR Minpishcheprom. Many technological and organizational problems have been solved and are being solved towards this end. Extreme importance is being attached to ensuring that a number of scientific-technical and organizational operations associated with enriching the oil-seed meal with various types of lipids are carried out jointly by the leading institutes of the branches of industry and VNIKP /All-Union Scientific Research Institute of the Canning Industry/.

Certain by-products are being produced by the oil and fat industry which, under the proper conditions, can be used for the preparation of mixed feed. Included among them are sunflower husks and cotton husks and also concentrates of calcium salts of fatty acids, the fats in bleached clays and the fats in deodorization distillates. Cotton husks are used for feed purposes and serve as a raw material for hydrolysis plants. Of the sunflower husks being

obtained at the present time, up to 150,000 tons are being supplied by the hydrolysis industry for the production of nutrient yeasts.

One ton of husks contains 30 kilograms of oil. Its nutritional value as a coarse feed is considerably higher than that of straw. Sunflower and cotton husks contain 2.5-3 percent or more of fat and up to 5 percent protein. The husks should ideally be enriched with certain lipids, potassium salts of fatty acids and oil waste. Such enrichment can serve to raise the oil content of husks to 8-10 percent. Specialist livestock breeders are of the opinion that inter-kolkhoz mixed feed enterprises could willingly become consumers of this product (35-40 rubles per ton) and in the opinion of VNIKP specialists -- also the state mixed feed industry, where based upon the use of sunflower husks, it is possible to produce the carbamide concentrate used for ruminant animals.

For the second year now, the Kerch Oil Pressing Plant of the Maslozhirprom NPO /Scientific Production Association/ has been enriching husks and supplying them to livestock farms for feed purposes. The Leningrad Oil and Fat Combine has been grinding up and supplying husks to an inter-kolkhoz mixed feed plant. The kolkhozes and other farms in Rostov Oblast are using a portion of the husks being produced at the Rostov-na-Donu Oil and Fat Combine.

It is economically more advisable to use husks in the structure of prepared oil-seed meal. This requires the introduction of sunflower processing with the partial removal of husks or even in the absence of their use entirely. Positive results were achieved at the Rostov Oil and Fat Combine from experimental processing without the removal of husks from a sunflower batch. Such a technology, in addition to lowering oil losses in production, will also increase considerably the overall quantity of protein obtained by mixed feed enterprises together with oil-seed meal, as a result of the protein in the husks and with a somewhat lower protein percentage in the oil-seed meal produced with a raised huskness. The initial steps taken in this direction by the Armavir and Zaporozhye Oil and Fat Combines have produced positive results.

With regard to raising the quality of the protein raw material being supplied to mixed feed enterprises, special importance is attached to those problems concerned with toasting the raw materials and products. Comprehensive solutions should be found for these problems. The indicators applied to the state standards for mixed feed must be provided for in the state standards for oilcake and oil-seed meal and accordingly in the state standards for agricultural raw materials. Everything must be interrelated and conform to the existing situation with regard to raw materials and the potential of the equipment.

The USSR Minpishcheprom, the food industry ministries of union republics and the oil and fat enterprises directly must exercise strict control over the quality of the oilcake and oil-seed meal being shipped to enterprises of the mixed feed industry and upon receiving comments and complaints indicating that the quality of these raw materials does not meet the requirements set forth in the appropriate standards, urgent methods must be undertaken aimed at eliminating those factors which resulted in the production of low quality

products. The quality of the raw materials received by the mixed feed enterprises is directly dependent upon the organization of good relationships among associated enterprises.

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## LIVESTOCK FEED PROCUREMENT

### MICROBIOLOGICAL RESEARCH APPLIED TO FEED PROTEIN PRODUCTION

Moscow SEL'SKAYA ZHIZN' in Russian 21 Dec 83 p 4

/Article by V. Kotelev, doctor of biological sciences and head of a biotechnology group in the Department of Metabolism Regulation of the Academy of Sciences for the Belorussian SSR: "Overcoming the Protein Deficit"/

/Text At the present time, biologists are devoting special attention to those microorganisms which are capable of producing proteins and other useful products. And this is quite proper. The computations of scientists reveal that even with the intensive development of agriculture, the development of as yet unused land areas and the breeding of new and highly productive varieties, it will scarcely be possible to overcome completely and rapidly the protein deficit throughout the entire world using these and other traditional methods alone, without the assistance of the microbiological industry. And its potential is very great. The fact of the matter is that microorganisms grow one hundred times faster than plants grown by man and several thousand times faster than animals bred by them. Moreover, accessible and cheap substances, including some which contaminate the biosphere, often serve as the nutrient medium for the "cultivation" of these invisible beings.

At the present time, studies on the synthesis of microbe protein and other products are being carried out in several directions. First of all, technologies are being developed and highly effective types of microorganisms are being selected which employ for their vital activities the waste products of agricultural production, forestry and so forth. At the same time, a study is being carried out on the possibility of obtaining such protein based upon inorganic compounds, including hydrogen, oxygen, carbon dioxide and small quantities of mineral additives. This method appears to be very promising. Indeed the waste products of agriculture and industry, although great in size, are nonetheless limited in nature. On the other hand, the supplies of inorganic compounds such as hydrogen, oxygen and carbon dioxide on our planet are practically inexhaustible.

In addition to other branches, the nitrogen industry, particularly such enterprises as the Grodno Azot Production Association, may become a sphere for the practical application of biotechnological methods for satisfying the requirements of agriculture.

Over the past few years, the researchers have devoted special attention to a group of microorganisms -- hydrogen-oxidizing bacteria. By consuming large

quantities of discarded hydrogen -- the waste product of enterprises -- they can supply production with a protein-vitamin concentrate on an industrial scale. In addition to hydrogen, the development of these bacteria also requires carbonic acid, oxygen and a certain quantity of chemicals.

The method which we developed makes it possible, with the aid of bacteria, to utilize efficiently and to convert the energy of discarded hydrogen into a high-calorie protein-vitamin biomass. Preliminary studies of such a biomass, obtained from laboratory units at the Azot Association, have shown that it contains up to 72 percent protein, that is, more than nutrient yeasts. Its concentrate has already been tested on laboratory animals. It turned out that the protein of hydrogen bacteria was assimilated very well by them and did not contain any harmful substances. The time is now at hand for carrying out such tests on large groups of agricultural animals.

A production evaluation has shown that at the Azot Association alone, using the waste products of hydrogen, it is possible to obtain up to 1,000 tons of protein feed biomass annually. Towards this end, work is being carried out here jointly with workers at the All-Union Scientific Research Institute of Biotechnics and the Leningrad Technological Institute imeni Lensovet in connection with the creation and testing of a large production unit. For its successful operation and as a result of extended breeding work, we have singled out a new and highly productive strain of hydrogen bacteria. Its morphological and biochemical features have already been studied and its suitability for testing under production conditions proven.

In view of the importance of this work, the USSR State Committee for Science and Engineering supplied the Ministry of Mineral Fertilizers Production and the Main Administration for the Microbiological Industry with the resources required for building the country's first industrial unit for the production of protein-vitamin biomass based upon the use of hydrogen. Thus work is already being carried out in this regard.

The ensiling of feed could be an important sphere for the use of a biotechnology. For the best preservation of silage, especially that obtained from such difficult to ensile plants as alfalfa and clover, use is not being made of chemical preservatives. A new preservative obtained from the waste products of sulphuric acid production is being developed and tested under production conditions by our workers, jointly with a problem laboratory of the Grodnenskiy RAPO [Rayon Agroindustrial Association] and the Azot Association. A check carried out on such silage has revealed that its quality is considerably better than the usual silage in terms of all of the feed and biochemical indicators. This was borne out by control tests carried out at the All-Union Institute of Animal Husbandry. The final experiments are now being carried out with the animals. Following successful testing, this preparation will be introduced into operational practice on an extensive scale.

Lactate yeasts appear to hold great promise with regard to the ensiling of feed. Jointly with an institute of the Academy of Sciences for the Belorussian SSR, we are developing a new type of dry yeast based upon the use of lactic acid bacteria. We are obtaining them not on the basis of dry milk, but rather we are using a raw material which is not in such short supply and which is cheaper -- grass meal. Experimental-production studies carried out on farms

in Grodno and Minsk Oblasts have shown that feed losses decrease by 11-16 percent in silage containing the new preservative yeast. Such silage contains more crude protein and lactic acid than does the usual silage. As a result, considerable improvements are realized in the edibility of the livestock feed and also in the return obtained from it in the form of products. Today, jointly with other organizations, we have commenced the preparation and introduction of a large batch of such yeast, referred to as gamma-lactobacterine.

Using microorganisms the scientists have succeeded in improving considerably the nutritional properties of straw. The method for its fermentation-yeast treatment has been recommended for production and the plants of Glavmikrobioprom have organized the production of the ferments required for this purpose. The livestock breeders in Moldavia and the Moscow region are mastering the new technology and yet it has still not been disseminated on a mass scale. In view of the difficulties associated with its introduction, our department furnished assistance in creating a technological line for this purpose. It is already in operation at the Kolkhoz imeni XXII S'yezda KPSS in Berestovitskiy Rayon, Grodno Oblast. Experimental-production tests have confirmed the fact that the fermentation-yeast treatment raises the feed value of the straw by 31 percent and its protein content -- by 23-26 percent, while lowering the amount of cellulose by 5-8 percent. As a result, a noticeable improvement has taken place in the edibility of such feed in the rations of cattle. The Grodno Oblast Agroindustrial Association, jointly with scientists and specialists, is undertaking measures aimed at ensuring that this method is disseminated on a more extensive scale throughout the oblast this year.

With the creation of hundreds of large livestock complexes, it is now becoming possible to obtain a large quantity of protein feed additives from the organic waste products that accumulate here. The processing of the organic substance found in farmyard manure into microbe protein, by cultivating definite groups of microorganisms in it, appears to be especially promising. Studies carried out by us have shown that it is possible, as a result of fermentation, to obtain protein bulk containing 20-25 percent crude protein and suitable for feeding directly to the livestock. Fifty-four kilograms of feed having a high protein content were obtained from 159 kilograms of dry farmyard manure.

The industrial synthesis of feed protein is a new and complicated undertaking. Nor are the difficulties restricted to merely raising this branch of production to the plant scale. The very culture of labor on livestock farms requires a higher level. The agricultural workers must learn how to utilize these most valuable feed preparations in an intelligent and efficient manner. A need exists for acquainting the agricultural workers with the methods for employing the various microbiological preparations. If this is not done, the effective introduction of the achievements of the microbiological industry into operational practice will simply be impossible. Concern must be displayed for training personnel for the new branch of industry, particularly engineer-microbiologists and middle echelon technical personnel who are capable of working in production and at scientific institutes. The number of such specialists undergoing training is still small.

Studies based upon the increasing relationships between the microbiological science and production are raising the need for creating centers which will be

capable of carrying out all of the work -- from the initial scientific ideas to the planning and practical development of new technologies. I am confident that a more dynamic and rapid conversion over from laboratory operations to experimental work and, even moreso, to the large-scale production of artificially synthesized proteins, will open up new opportunities and promising methods for solving the food problem.

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## LIVESTOCK

### ACCOUNT OF CATTLE TRANSPORT, PROCUREMENT PROBLEMS IN RSFSR

Moscow IZVESTIYA in Russian 6, 8 Oct 83

/Articles by M. Ovcharov and O. Pavlov, Saratov-Moscow: "Transporting Young Bulls Over Great Distances"/

/6 Oct 83 p 2/

/Text/ With losses amounting to 100,000 tons of meat in the RSFSR alone and the kolkhozes and sovkhozes sustaining losses amounting to one half billion rubles.

The people who started this history are now smiling sadly. And they have requested that their names not be mentioned. These names are included for various reasons in the column entitled "Penalties" -- for unnecessary initiative.

Those with whom we held discussions recalled the period with satisfaction. "At the time, both the work and the future prospects made us feel younger." Somebody stated: "It was just like in the song -- 'How young we were'". And then he added: "And how naive."

Moreover, the discussion did not take place among a group of representatives of the fine arts, but rather among economists, party workers and our deputies. The history itself is extremely prosaic. At its very beginning we became acquainted with its heroes. And today -- how has it unfolded?

Recently we traveled the long road leading from Saratov to Pugachev. At various points we encountered motor vehicles and heavy tractor trailers in which chestnut brown young bulls were being shaken about. They were being transported a distance of almost 300 kilometers to the city of Engels, to a meat combine. This was a strange development: it was 7 years ago that an inter-farm enterprise for the processing of cattle was built on the outskirts of Pugachev. We had heard many and varied opinions concerning this initiative. At one time it was actively supported throughout the oblast, but then later...

Just as in many areas, an inter-farm association for the production of meat was created here. There are very few who wish to perform poor work! Thus the rayon's officials decided to build their own mixed feed plant and alongside it, a small but nevertheless well equipped meat combine capable of processing up to 80 percent of the fattened young bulls at the site.

In accordance with the existing specialization, the principal bulk of the young stock on the association's farm is delivered to the leading enterprise -- the Yemel'aynovskiy Sovkhoz. From here, just as soon as they have attained a weight of 400-450 kilograms, they are immediately sent to the association's own meat combine. Uniform batches, throughout the year and without any holding over. In accordance with the schedule coordinated with the kolkhozes and sovkhoses, the combine would also process hogs and sheep. And if an unforeseen event occurred on the farm -- let us assume that an animal breaks a leg (anything is possible when there are many animals on hand) -- the inter-farm combine would accept the animal out of turn and it would not have to be transported very far.

And consideration was given to making full use of all waste products. Sub-products -- sales at the site, meat-and-bone meal to a mixed feed plant. Even water following biological purification -- for irrigating a large tract of grasses and grass meal -- again a valuable additive for mixed feed. And not only did they compute all of this at Pugachev, but in fact they truly carried out all of these measures.

Difficulties were encountered with the planning, the equipment and with the personnel. But they coped with the tasks at hand. While the combine was under construction, an intelligent senior student was found in Moscow, at an institute, who later became the enterprise's chief technologist. So as not to upset the young people with empty promises, a fine apartment building was erected for them.

The combine was placed in operation in December 1976. The enterprise operated for 6 months. Certainly, not all of the work had been completed. However, the agro-industrial complex was already realizing an advantage. Although it bears mentioning that this was still several years prior to the May (1982) Plenum of the CPSU Central Committee, which adopted the USSR Food Program, an important role in the fulfillment of which will be played by the agro-industrial associations.

It was 6 years ago that we visited the Pugachev combine for the very first time. Alas, we encountered a deafening silence. Just as on a ship that had been placed in "mothballs," here there were several individuals responsible for monitoring the light, heat and frost conditions (it was winter at the time) and ensuring that no pipes burst or instruments broke down. The rayon leaders who accompanied us could not conceal their disappointment: the equipment lay idle, the idea of a closed cycle for fattening the cattle had been discarded. The losses which could have been avoided had the combine been in operation were especially disturbing.

The economists recalled that formerly a special railroad train arrived on certain days from Engels -- railroad rolling stock for the meat combine -- and it loaded a large batch of cattle. Perhaps not the very best solution, but nevertheless... And what about now? An entire train is no longer arriving; the freight cars must be coupled up to a general freight train. Along individual sections of the road it moves along at a faster pace than does the "special train" and yet it must be reformed on more than one occasion along the route. A route 300 kilometers in length -- requiring 6-7 days. Moreover, the cattle are not always watered and fed at the stations.

The result is as follows. The young bulls lose no less than 25-30 kilograms of live weight while traveling the Pugachev - Engels route. Hogs -- 8-9 and sheep -- 4-5 kilograms. The overall losses along this route amount to 200-250 tons of live weight annually and the value of these losses is estimated to be 350,000-400,000 rubles in accordance with the new purchase prices.

If one takes into account deliveries to other combines (in the cities of Volsk and Balakovo in Saratov Oblast, Chapayevsk in Kuybyshev Oblast and Moscow) and also cattle losses caused by untimely slaughtering work, then the overall losses increase to one and a half million rubles. In just one region alone!

The quality of the products is also declining. During shipments over great distances and in unsuitable transport vehicles, the cattle sustain injuries and their hides cannot be used for making fine footwear or elegant sheepskin coats. There are also many other hidden costs. One fact was cited for our benefit. In accordance with the existing system, a zootechnician at a large kolkhoz, over a period of a year, must travel to the combine up to 30 times in accordance with the schedule as the farm's representative. It thus happens that a specialist is thus removed from his principal work for a period of from 150 to 200 days.

There is another fact that is very important. In order to obtain a monetary bonus for nutritional value, the cattle must be fed on the farm for an extra month. If this is not done, the losses which take place along the route will not be made up. An extra month at the rayon level, where there are 58,000 head of cattle alone, represents a tremendous expenditure of labor, feed and power engineering capabilities.

And what about transport expenses? In accordance with the existing statute, the meat combine must provide reimbursement for them. But only to one terminal. And even then not completely. The arithmetic is as follows: the delivery of a ton of cattle from Pugachev to the nearby Balakovo Meat Combine costs 10 rubles and 70 kopecks. The farms are paid 5 rubles and 15 kopecks. Shipments to the cities of Chapayevsk, Kuybyshev and Engels cost from 24 to 54 rubles, with reimbursement amounting to not more than 10 rubles. Thus, over the course of a year's time the farms spend approximately 180,000 rubles for transporting cattle and they receive back from the combines only 45,000-50,000 rubles.

The initiative displayed by the economists was based upon these and certain other factors.

They did not receive any support from Minsel'khoz /Ministry of Agriculture/ or Minfin /Ministry of Finances/ for the RSFSR. This derived from the fact that the rayon's kolkhozes and sovkhozes, instead of investing resources in the production of meat, were using them for creating processing capabilities, which quite properly is the responsibility of state enterprises. From a formal standpoint, it would appear that this was all quite correct: "a diversion of resources..." But only from a formal standpoint. For in the ministries they had forgotten about the great losses which the farms and state were sustaining as a result of the obsolete system of procurements, which had developed in our country back in the 1920's under the influence of leading

foreign experience at the time. They either forgot or gave the appearance that the celebrated Chicago slaughtering houses, for example, no longer existed: it is unprofitable to transport cattle over great distances.

In Pugachev, they based their actions upon this fact. But the history developed as follows. The money (approximately 600,000 rubles) expended during construction was returned to the shareholders. The inter-farm combine was transferred over to the RSFSR Minmyasomolprom /Meat and Dairy Industry/. And the latter, as it turned out, did not need it. It remained inactive for almost a year under the pretext of modernization.

Thus, let us examine without emotion that which took place. Is it possible that absurd "independence" was really organized in Pugachev? But the workers in Pugachev had to be offended: using their own hands and their own initiative they had built their own combine, only to be forced later to turn it over to somebody else. Nevertheless, the combine is in operation. It is also true that eventually, although not immediately, the leaders of the oblast's meat processing industry carried out their promise for the most part: at the present time, the farms in Pugachevskiy Rayon are enjoying the privilege of being the first to turn over their cattle.

But it turns out that this "most favorable regime" does not yield such great results. The capabilities of the Pugachev Combine are making it possible to slaughter up to 200 head of cattle during three shifts. It operates on the basis of one shift: its cooler holds only 150 tons. The rayon inter-farm enterprise plans to increase it to 500 tons -- and the orders have already been submitted for the project. But they never succeeded in commencing the construction: the combine was transferred over to other hands.

And just as in the past, large quantities of cattle are being shipped from Pugachev over great distances in all types of transport vehicles. There are times when the animals cannot be moved beyond Engels, at which point the young bulls are shipped to other distant meat combines -- perhaps to Chapayevsk in neighboring Kuybyshev Oblast.

And what is the situation with an individual farm? An animal is raised but where is it to be delivered to? Should a sheep be shipped to Engels by train? But there is nobody at the site to accept it. Here the losses can be tremendous. And a chief concern is the fact that this system discourages rural residents from wanting to raise livestock.

There is still one other consideration: how many hides are being lost -- just as in the past, they are at times simply being discarded!

And finally the idea of creating an agroindustrial unit in Pugachevo likewise seems to have disappeared: new managers came to the former rayon combine -- the equipment of the mixed feed department was rusting, the preparation of meat-and-bone meal had been terminated and the aeration pool which supplies water for irrigating the fields was ruined.

Yes and this is all understandable. The workers of Minmyasomolprom have their own interests. And how can these interests be combined with the state interests?

Indeed, today this discrepancy is resulting in a shortfall of 100,000 tons of meat in dressed weight in the Russian Federation alone and the kolkhozes and sovkhoses are losing approximately 500 million rubles annually. But more about this later.

/8 Oct 83 p 2/

/Text/ Actually, how is it possible for the interests not to coincide? This thought gave us no rest while we were at the Engels Meat Combine.

It must be confessed that it produces an extremely strong impression. Established During the years of the first five-year plans, the combine began producing goods in 1936 and today its capabilities are still being increased as it undergoes modernization. The enterprise is one of the largest in the republic's Minmyasomolprom /Ministry of the Meat and Dairy Industry/ and the leading enterprise of the Saratov Association of the meat industry. On more than one occasion it has been the recipient of awards in the competition against such giants of the meat industry as the Moscow, Leningrad, Orsk and Ust-Kamenogorsk Combines. The management includes experienced specialists -- director L. Vlasova (she heads the oblast association), the chief engineer A. Galagan and others.

They discussed with us in detail the present day events and future prospects for developing the combine, which handles practically one half of the Saratov cattle on its production lines. They are transported here from dozens of rayons in Saratov and Vologda Oblasts and from Kazakhstan. On peak days the enterprise processes several hundreds of tons of cattle. In addition to Pugachevskiy Rayon, there are kolkhozes and sovkhoses located at distances of 150 to 300 kilometers from it in Dergachevskiy, Arkadakskiy, Ivanteyevskiy, Yershovskiy, Krasnopartizanskiy, Perelyubskiy and some other rayons -- is this an inconvenience only for the farms?

The Engels Meat Combine, which receives large groups of cattle from ill-suited transport means, also suffers in its own way. Following slaughtering, damaged "tissue" is eliminated. It is not suitable for food goods and it lowers the meat yield. And it would not be so bad if this happened only during the peak season. But this is not the case. The procurement system produces losses at any time of year. And not just when the goods are enroute.

We met Petr Kuz'mich Dorogoy at the gates to the Engels combine. Up until recently he was known as the head of a cattle concentration base and now he is simply a senior specialist. And this truly is more logical: indeed Petr Kuz'mich never had a "base." It was simply that the cattle were offloaded from freight cars in front of the windows of his office. And also from motor vehicles. On some days, up to 1,500 young bulls and 10,000 sheep would accumulate. The farm representatives cursed Dorogoy and they hurried to the production line to check on the situation: could it be that somebody somewhere was deceiving them? It sometimes happened that up to 100 persons gathered. This was their right. The combine was even forced to build a hotel. And on many occasions there was good reason for the "representatives" displaying such concern.

We were told how on one occasion the Oblast Inspection for Procurements and the Quality of Agricultural Products inspected the Engels Meat Combine. No ChP /extraordinary event/ was uncovered. But there were many incidents involving negligence, carelessness and a lack of respect for the livestock suppliers. One of the state inspectors, S. Pokidov, provided us with the following information: over the course of a year's time, the combine underpaid the farms in the amount of 119,411 rubles. In their procurement plans, the kolkhozes and sovkhoses were not credited with 68.6 tons of cattle. Once again the figures in the overall volumes were not that great. The general director handed down several strict reprimands and it must be assumed that they were deserved. Beyond any doubt, these measures serve to discipline individual workers attached to the combine and they improve specific production sectors. But if we glance at the problem as a whole, what changes do they bring about? Do they aid the economists of Pugachevskiy and other rayons? Do they make the life of Petr Kuz'mich any easier? The answer is no. It is unfortunate that no solutions are being found for these procurement system problems which began long ago. Nor is this the case only in Saratov Oblast.

Permit us to refer to the competent opinion expressed by the chief of the Main Administration for Animal Husbandry of the USSR Minsel'khoz /Ministry of Agriculture/ P. Korneyev: "The conditions required for the pre-slaughtering maturing of the animals have not been created at a majority of the country's meat combines, the cattle are being maintained in exposed enclosures during both summer and winter and quite often they are not being provided with watering facilities. All of this is resulting in considerable losses in live weight and in a reduction in the meat yields. According to estimates by specialists, the state loses more than 100,000 tons of meat in dressed weight annually during the pre-slaughtering maintenance of cattle and the processing of carcasses in the Russian Federation alone and the kolkhozes and sovkhoses lose approximately 500 million rubles. In the process, all of the losses in meat products are written off at the expense of the kolkhozes and sovkhoses."

And never once does Minmyasomolprom suffer from this, nor do its workers grieve over these losses. We are fully justified in making this statement.

It would seem that everything is infinitely clear and understandable. In order to avoid these tremendous losses, a need exists first of all for reducing the radius of livestock deliveries. Alas, according to data furnished by the USSR Minsel'khoz, the average distance at the present time is 100 kilometers and it is even greater in the Ukraine, Uzbekistan and Kazakhstan -- 240-250 kilometers. Does Minmyasomolprom intend to change this situation substantially in the foreseeable future?

Here is how the deputy minister of the meat and dairy industry for the USSR Yu. Krokha responded to this question:

"Yes, truly, the processing enterprises must be located closer to the raw materials: considerable numbers of cattle are being transported over distances of 100-150 kilometers or more. This is not a simple problem and yet it must be solved and we will do just this. Standard plans are presently being developed for small slaughtering houses with capabilities for handling 10-20 tons daily. During the 12th Five-Year Plan, we must build 100 such compact enterprises throughout the country as a whole.

There is nothing to say -- the plan is a good one. But will 100 slaughtering houses solve the problem? Let us examine the situation. We have been assured by Minmyasomolprom that the program for branch development on a grand scale, if it has not already done so, will recede eventually into the past. Real proof of this lies in the fact that in the RSFSR, for example, the plans call for the construction of only three meat combines, each with a 100 ton capability, during the 12th Five-Year Plan. This is several times less than the number built earlier.

Let us assume that this will take place. But at the same time it becomes clear that 40 percent of the existing enterprises will undergo modernization during the next five-year plan, with use being made for this purpose of 70 percent of all appropriations allocated for development of the branch (this is 2 percent more than the figure for the present five-year plan). And modernization implies first of all a considerable increase in the capabilities of the enterprises. Thus the capability of the large meat combines at Kiev, Donetsk, Uralsk and Petropavlovsk (Kazakh SSR) will be raised, for example, to 200 tons. This will consume, as we have already stated, the principal portion of the capital investments. It turns out that the delivery radius for cattle, if it decreases at all, will be shortened by only a small amount.

Certainly, the modernization of old enterprises is both necessary and difficult and the construction of new and even small combines in remote areas, or even slaughtering houses, is by no means easier and at times even more difficult. And since Minmyasomolprom is not economically affected by losses sustained enroute or by delays encountered at the gates to the meat combines, it is thus not motivated to give the problem much thought.

What can be done to stimulate Minmyasomolprom into distributing the meat combines in a more rational manner? USSR Minsel'khoz offers one solution: converting Minmyasomolprom over to accepting the livestock directly on the farms, moreover not a formal acceptance by number of head, but rather on the basis of live weight. This would mean that the processing industry would be entirely and completely responsible for losses sustained enroute as a result of great distances, excessive delays, failure to provide proper watering and feeding and other stresses imposed upon the animals. And those with whom we held discussions assured us that this would motivate a department into applying itself in a more energetic manner to the problem of the proper distribution of its enterprises with regard to the raw material base.

"You see" stated the deputy minister of the meat and dairy industry for the USSR Yu. Krokha, "We also favor accepting the livestock at the site. But not on the basis of live weight, but rather according to the quantity and quality of the meat following slaughtering."

In other words, by the number of head. One can understand the position taken by Yuriy Andreyevich: he is defending his own departmental interest. It bears mentioning that such a position on the part of Minmyasomolprom was described one and a half years ago in IZVESTIYA (Issue No. 117/118, 1982) in an article entitled "A Young Bull At a Departmental Boundary." And the question still remains open.

The present system for procuring cattle (yes and other types of agricultural products) unfortunately is not being viewed from the standpoint of the interests of the producers -- the kolkhozes and sovkhoses and their expenses for marketing the products. Today many enterprises engaged in the processing of agricultural raw materials have joined agroindustrial associations. However, they still have not been able to overcome their departmental interests. And a defense mainly of one's own interests results only in personal gain at the expense of the overall task. In addition, it deters from achieving a maximum increase in the production of agricultural products and in presenting these products to the consumer in the very best form. Is the time not at hand for all of the departments to find a mutually acceptable solution, one which will eliminate all product losses while enroute from the farm to the consumer?

Such a need is underscored by the example of the Pugachevo Inter-Farm Enterprise for the Processing of Cattle on the one hand and the difficulties being encountered by the oblast's meat industry association on the other. The problems of the Pugachevo Inter-farm Combine are well known throughout the oblast and still this type of enterprise is presently being built in several other rayons. The agricultural experts reason as follows: even if the enterprises are withdrawn following the completion of construction, the processing base nevertheless will remain close at hand. And this will be good.

Today the chairman of the large Zavolzhye Kolkhoz imeni XX S'yezda KPSS in Pugachevskiy Rayon, V. Razinkin, is shipping a batch of cattle to Kuybyshev. One hundred kilometers to reach asphalt and thereafter the same distance over asphalt. Razinkin instructs the people:

"There will be four Kirovets and eight ZIL machines. There is a ravine at Khvorostyanskiy. A wash-out caused by heavy rainfall has been reported. But we are leasing a bulldozer from a nearby sovkhos and thus somebody can go ahead and obtain the bulldozer. This will enable the tractor operators to carry out their work swiftly and smartly. You know what has to be done. And so lads, let's get started!

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## LIVESTOCK

### IZVESTIYA ROUNDTABLE DISCUSSION ON LIVESTOCK SECTOR MANAGEMENT

Moscow IZVESTIYA in Russian 20 Nov 83 pp 1,2

/Article by N. Gryzlov, M. Ovcharov and O. Pavlov: "In Their Own Interests"/

/Text/ The readers are reminded of the discussion which took place in the article entitled "Young Bulls Transported Over Great Distances," published in IZVESTIYA issues Nos. 278/279 and 280/281. Many kolkhozes and sovkhoses are presently being forced to deliver their cattle to meat combines which at times are located hundreds of kilometers from the farms. This leads to losses in meat products during the transporting of the animals. Losses also occur as a result of delays which take place at the gates to the meat combines.

It would seem to be quite clear: in order to reduce these losses, the delivery radius for the cattle must first of all be reduced, enterprises of the processing industry should be located closer to the production areas, the turning over of the animals should be organized in a more efficient manner and according to a schedule and a single method should be developed for accepting and evaluating the cattle, as required by the Food Program. Since the two leading departments -- USSR Ministry of the Meat and Dairy Industry and USSR Ministry of Agriculture -- upon which a great deal depends if solutions are to be found for these problems, share different opinions, a proposal was made to have IZVESTIYA conduct a roundtable discussion. Representatives of USSR Minmyasomolprom /Ministry of the Meat and Dairy Industry/ insisted that this be done. The meeting took place. It was attended by important specialists and scientists. A report on this meeting is provided on the second page of this issue of the newspaper.

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Prior to turning the floor over to those participating in the discussion, we would like to note that the article aroused a strong response. The overwhelming majority of the readers supported the position taken by the newspaper. However, there were some responses of another type. For example, the general director of the Volgograd Oblast Association of the Meat Industry G. Yerkin believes: "The construction of low-volume meat combines in zones of developed animal husbandry operations is not advisable."

But there is also the opinion expressed by the chairman of the Solodchenskiy Kolkhoz in this same Volgograd Oblast, G. Dorokhin: "They do not wish to

accept the cattle at the sites or on the farms and particularly based upon live weight. And we had to transport them ourselves on tractors over hundreds of versts. Yes and no haste was displayed at the meat combine. Recently we delivered 19 head of cattle, the overall weight of which was 8,111 kilograms. Prior to being slaughtered, the cattle stood idle for almost 4 days. As a result, we sustained large losses in both cattle and money."

"This problem echoes our old and erroneous doctrine which recognized only a large village" commented the 1st deputy chairman of the Belorussian Council of Ministers Yu. Khusainov, "The countryside has suffered greatly because of this, with small slaughtering houses and creameries being eliminated along with 'unpromising' villages."

And now we listen to a few words expressed by the rector of the Don Agricultural Institute, Doctor of Agricultural Sciences V. Stepanov: "At our uchkhov /training farm/, we built our own meat combine for the processing of all types of animals and poultry. Hence the consumers are supplied with meat of outstanding quality. We also have our own refrigeration unit. On one occasion we conducted an experiment. We singled out two groups of hogs. The one we shipped to a meat combine at Novochoerkassk -- a distance of 15 kilometers and the other group we slaughtered ourselves at our training farm combine. The meat yield obtained from the Novochoerkassk combine turned out to be less than that obtained at our training farm. It came as no surprise to learn that the animals, even over such a short distance, were subjected to stress."

Many such letters have been received. They are still arriving in the mail. In short, the soil for the "roundtable" discussion was prepared by our readers. Thank you! And now -- a brief record of the discussion.

IZVESTIYA correspondent: It is assumed that the Ministry of the Meat and Dairy Industry is not experiencing any particular inconveniences from the irrational disposition of its enterprises. Does this mean that the kolkhozes and sovkhovs are the ones that are suffering for the most part?

G. Cholokyan, chief engineer for the Administration of Planning for Enterprises of Minmyasomolprom: It is my wish that you understand us correctly. We have reexamined to a considerable degree the plans developed earlier for the disposition of our enterprises. Detailed maps on which all of the extra-long cattle transport routes were plotted were prepared for literally each oblast, kray and republic. These were routes which were more than 100-150 kilometers in length. Throughout the country, 14.4 percent of the transport operations are carried out on such routes. Why was this situation allowed to develop? It was partly owing to the fact that in a particular oblast or republic many of the cattle just happened to pass by enterprises which were not operating under complete workloads. We corrected the problem to a certain degree. But there was also another factor: for a large number of raw material zones there was a shortage of capabilities. What was the solution to be? The decision was made to build 98 slaughtering houses throughout the country prior to 1990, with each capable of processing 10-20 tons of cattle daily.

IZVESTIYA correspondent: Am I to assume that you expect the problem to be solved in this manner?

G. Cholokyan: Obviously, this is not an easy problem. At least we are striving to ensure that the delivery radius does not exceed 100-150 kilometers and this is an optimum distance that has been approved by science.

IZVESTIYA correspondent: Which science?

G. Cholokyan: Our "meat" science, in the form of the branch institute.

I. Kurtsev, Doctor of Economic Sciences (All-Union Academy of Agricultural Sciences imeni V.I. Lenin): But do not forget that there is still the "agrarian" science. And here I would like to define the situation more precisely: 100-150 kilometers is not the optimum, but only a partially acceptable distance. Generally speaking, it is a limiting distance. Indeed we are aware that cattle are often transported a distance of 300 kilometers. Even if the cattle delivery distance actually does not exceed 100-150 kilometers, this does not necessarily mean that no product losses will be sustained.

Yu. Tatulov, department head at the All-Union Scientific Research Institute of the Meat Industry: This requires an understanding of the different types of losses. There are losses in useful product which certainly cannot be tolerated. And there are natural changes in the live weight of cattle caused by removal of the contents of the gastro-intestinal tract. For some reason, these two concepts are often confused by many people. Many scientists testify to the fact that animals begin to lose useful product only after 48 hours of pre-slaughtering delay.

P. Didenko, chief of administration for USSR Minsel'khoz /Ministry of Agriculture/: Quite often the cattle are left waiting for 5-6 days at the gates to the meat combines. Thus it is valid to mention losses caused by the removal of the contents of the gastro-intestinal tracts of the animals. These are true losses in product!

A. Ignatenko, chief of administration for USSR Minmyasomolprom: But it should be borne in mind that the methods for determining the losses in useful product are still not perfect and this leads to discrepancies in evaluating these losses. Moreover, we compared the systems for turning over cattle and we drew the conclusion that it is more efficient to evaluate them not in terms of live weight but rather based upon the quantity and quality of the meat. According to the final result.

L. Kuznetsov, deputy minister of agriculture for the USSR: You obviously reached such a conclusion because you do not wish to accept losses which are presently being borne by agriculture in connection with cattle deliveries. And what happens? As described in IZVESTIYA, the kolkhozes and sovkhoses transport their young bulls over great distances. And they do so using their own transport equipment. And at the meat combine, the animals must wait for a long period of time before being accepted. But why should agriculture alone have to pay for all of this? The question we have raised is the same one that has appeared in decisions handed down during recent party congresses and plenums of the CC CPSU. The cattle should be accepted on site at the kolkhozes and sovkhoses. And based upon live weight. This means that a representative of Minmyasomolprom would go to a farm in his own vehicle and

purchase the young bulls. You could purchase as many as are required, with the number being stipulated in a preliminary agreement. Receipts would be issued. And from this moment on your personnel would bear complete responsibility for the cattle accepted. But at the moment Minmyasomolprom does not agree with this plan. Is this not so Yuriy Andreyevich?

Y. Korkha, deputy minister of the meat and dairy industry for the USSR: You can refer to my position, Lev Nikolayevich, as being departmental in nature, but I will state directly that it is not an easy one for us. You are well aware that several years ago a decree was adopted calling for the centralized transporting of livestock and milk from the farms. But over the past 3 years we have not received one kopeck for this purpose. Nor is there any plan to give us anything for the last years of the 11th Five-Year Plan. We are constantly raising these questions at Gosplan. We maintain that we have an urgent requirement first of all for specialized transport equipment. But there still is no base. We do not object to centralized transport operations.

L. Kuznetsov: Yes, this is not the problem. For us, even the terms are different. "The acceptance of cattle at a site according to live weight" is not the same as "centralized transport." Indeed, in the case of centralized transport, you once again do not wish to bear responsibility for the cattle. Hence they state that they will carry out the slaughtering work and thereafter inform you as to how many and what type of acceptance receipts will be issued only following the slaughtering of the cattle. "Centralized transport," regardless of how you visualize it, is not necessary!

Yu. Krokhoz: But ask yourself what the situation would be if all of the cattle were accepted on site based upon live weight? Yes, this would require 30,000 commodity experts and 30,000 bookkeepers.

L. Kuznetsov: Yuriy Andreyevich, overall we have 45,000 kolkhozes and sovkhoses in the country. Do you wish to imply that each farm should have its own acceptance expert?

Yu. Krokha: A specialist should be sent to a kolkhoz or sovkhos even for the sake of 10 head of cattle. For only a specialist is capable of evaluating the quality of the goods that we accept. Yes and the standards for cattle are extremely inadequate. Endless arguments, however justified, take place between ourselves, yourselves and the trade.

L. Kuznetsov: But here you seem to place your interests higher than all others. You object to accepting cattle on the basis of live weight and you refer to the subjective nature of evaluating their quality, despite the fact that the system which your department advocates is also fraught with many mistakes. As early as 1978, Minsel'khoz introduced into the USSR State Committee for Standards a draft for a new GOST /State Standard/ which, distinct from the existing one, called for animals to be evaluated based not upon the degree of accumulation of subcutaneous fat but rather according to age and live weight. That is, according to objective indicators that can be measured. However, the GOST was not approved as a result of your objections.

P. Didenko: Meanwhile, an agreement was reached in Lithuania between the kolkhozes and sovkhoses on the one hand and the meat industry on the other.

Here the cattle are accepted on site, based upon live weight and in the absence of disagreements. And you, Yuriy Andreyevich, are certainly well aware that they have fine cattle. The average weight of their cattle is 426 kilograms. I would also like to make a statement concerning personnel. Is one of your specialists to be found at each farm? For what purpose? During a day's time, he is fully capable of visiting several areas. Once again, on the basis of a schedule and an agreement. Moreover, each kolkhoz and sovkhoz has its own specialists. Joint operations can be organized. But based upon other principles. At the present time, your production lines are monitored and controlled by agricultural specialists. And they do so instead of applying themselves to their own tasks.

A. Ignatenko: Nobody needs live weight. Is it that you eat live weight and not meat?

P. Didenko: I repeat. You speak in this manner because you do not bear responsibility for the cattle accepted specifically at a farm. But why don't you bear such responsibility?

IVESTIYA correspondent: Really, why not? Imagine for yourself. The chairman of a kolkhoz delivers a young bull to you and yet he does not know what type of technological process you have organized, the type of specialists you have working for you or the degree of losses you are tolerating on your production line. Indeed, you yourself are aware that a large number of your enterprises are technologically inadequate. And here the losses are not even caused by carelessness on the part of somebody.

Yu. Krokha: Nobody at our enterprises is interested in deceiving a farm.

L. Kuznetsov: This is true. We are all striving to reduce losses and yet they nevertheless arise. An amicable solution for all concerned must be found as rapidly as possible.

We believe that the discussion which took place at the "round," but with sharp corners, table was interesting and by no means useless.

What conclusions finally emerged? The leaders of the two different ministries, having met in this manner, met with no success in bringing their positions closer together and they continued to defend, as the saying goes, their own interests.

It is our opinion that the essence of this problem lies in the fact that a kolkhoz or sovkhoz produces not meat but rather cattle. The meat is obtained and other products produced from it by enterprises of the meat industry. Thus it is logical for cattle to be accepted at a site on the basis of weight and quality. Further, the workers attached to Minmyasomol-prom, when processing the animals, must obtain a maximum yield of finished products, eliminate losses, take measures to preclude product spoilage and achieve success on this

basis. Here there must be a clear delineation of the work and responsibility of each individual participating in the production line operations. It is obvious that definite measures are required for stimulating the on site acceptance of cattle, with the objective difficulties of Minmyasomolprom being taken into account.

But judging from the discussion and the responses being received by the Editorial Board, the departments are not reaching agreement among themselves on an independent basis. They each have their own purses and nobody wishes to share with another. It is obvious that the Committee for Problems Concerned With the Agroindustrial Complex, of the Presidium of the USSR Council of Ministers must focus attention on this prolonged inter-departmental argument in the interest of finding an optimum solution.

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## LIVESTOCK

### ACCELERATION OF CATTLE RAISING IN EAST SIBERIA ADVANCED

#### Regional Problems Specified

Omsk ZEMLYA SIBIRSKAYA DAL'NEVOSTOCHNAYA in Russian No 9, Sep 83 pp 26-28

[Article by N. N. Oblachkov, deputy director of the main production administration of the Eastern Siberian Region of the RSFSR MSKh [Ministry of Agriculture]: "Cattle Raising in East Siberia--Eliminating Lags"]

[Text] The main task of the 11th Five-Year Plan, as determined at the 26th CPSU Congress, is securing the continued growth in the well-being of the Soviet people on the basis of a stable, advancing development of the national economy. An important problem for the five-year plan involves the Food Program. A special role in its implementation will be played by the development of agriculture and in particular of the branch of livestock raising. In the enterprises of East Siberia about 70 percent of all gross agricultural production comes from livestock raising. By the end of the 11th Five-Year Plan the average annual procurement of meat in the region should increase in comparison to the 10th by 21 percent; of milk--by 15 percent; of eggs--by 31 percent; and of wool--by 14 percent.

The fulfillment of such an intensive program requires that special attention be paid to one of the basic branches of livestock raising in East Siberia--cattle raising. The dynamics of its development is attested to by the fact that the herd of cattle in the private sector has decreased or stabilized. Growth is occurring primarily in the public sector. Thus, the herd of cattle increased in the region by a factor of almost 1.5 by 1983 as compared with 1960; the herd of cows--by a factor of 1.6.

Quality indicators are improving much more slowly or not at all. Methods of intensive raising and fattening of calves and of reproducing the herd are being introduced slowly and the preservation of calves and adult cattle is low. In many enterprises beef production has been unstable over a period of a number of years. In 1975 the enterprises of East Siberia produced 292 kilograms of beef per cow and in 1982 this indicator remains at the previous level.

The basic path toward growth is the intensification of the branch, increasing average daily weight gains. However, in a number of enterprises this

indicator is still low. Thus, in Krasnoyarsk Kray it comprised 420 grams in 1982; in Irkutsk Oblast--366; in the Buryat ASSR--338; in the Tuva ASSR--329 and in the enterprises of Chita Oblast--only 307 grams. In 1982 the average delivery weight of cattle in the region comprised 333 kilograms; in the Buryat ASSR it comprised 290 kilograms and in the Tuva ASSR--298 kilograms.

Low qualitative indicators during the raising of cattle increase the fattening period and decrease its effectiveness. On the average in the zone's enterprises the duration of fattening cattle until its delivery to a meat combine comprises 29 months, and 35 in Chita Oblast and 30 in the Tuva ASSR. The reason for this is the poor feed quality and the nutritionally-unbalanced rations.

During the last 10-12 years expenditures for concentrated feed per 1 quintal increase have tripled. At the same time the proportion of succulent and especially of full-value coarse feeds in the rations of calves has dropped sharply. In practical terms there was substitution of a portion of voluminous feeds by grain concentrates without a growth in the general feeding level. There is decreased attention to the production and quality of coarse and succulent feeds and an increase in grain expenditures did not result in the desired effect, raising the intensity of the grain balance.

Consequently, the most important factor in the growth of beef production should be a sharp increase in the procurement of full-value coarse and succulent feeds, and concentrates should be fed only in the form of mixed fodder according to elaborated recipes. Especially important for the region concerned with whole milk production is the rapid development of production of milk substitutes and starter feeds. Only this will enable us to solve the problem of utilizing all above-plan calves for beef production.

The dairy productivity of cows is still low. In 1982 average milk yield per cow in the zone's enterprises comprised only 1,987 kilograms, which is lower than 1970 levels. Since 1978 milk procurement has been decreasing each year in Krasnoyarsk Kray, Chita Oblast and the Buryat and Tuva ASSR's; the national economic plan is not being fulfilled in many enterprises and the productivity of cows is not increasing.

Of course the fulfillment of plans regarding the production and procurement of animal products have been affected by serious objective difficulties, but their influence would be significantly smaller if they were met with battle readiness, organizational work, skilful manipulation of resources and the maximal utilization of existing possibilities.

An analysis shows that the feeding level of cattle in the region remains low. Whereas in 1970 31 quintals of feed units were expended on the average in the region per cow in 1981 34.6 quintals were expended. In Krasnoyarsk Kray, Irkutsk and Chita oblasts and Buryat and Tuva ASSR's the respective figures are: 32 and 37; 33 and 38; 29 and 35; 26 and 30; 31 and 33 quintals. It is characteristic that feeding improves basically because of concentrates. Whereas in 1970 on the average in the region 8 quintals were expended per cow, in 1981 10.3 quintals were expended. In Krasnoyarsk Kray, Irkutsk and Chita

oblasts and the Buryat and Tuva ASSR's the respective figures were: 7.5 and 10.1; 10.5 and 12.5; 6.7 and 8.3; 7.1 and 9.3; 7.2 and 7.9 quintals.

As we can see, the expenditure of grain for the production of milk and beef is very high. Meanwhile, native and foreign practice has accumulated a great amount of experience regarding achieving high dairy and meat productivity with moderately concentrated type of feeding. With high-quality coarse, succulent and green feeds it is possible to reach an annual milk yield of 2,500-3,000 kilograms almost without expenditures of concentrated feeds.

At the present time and in the future the procurement of pressed or loose hay from raw materials dried in the fields to a moisture content of 35-40 percent and then additionally dried via active ventilation must become more widespread. There must also be increased procurement of crushed haylage from raw materials pressed in the fields with a moisture content of 51-60 percent. It should be stored in concrete trenches. Silage should be prepared by utilizing chemical preservatives.

The most urgent task of the present and near future is increasing the nutritive value of straw. For this it is essential to have a firm foundation of material-technical supplies for shops that process coarse feeds and that prepare sufficient quantities of simple feed mixtures. At the present time there are about 1,500 feed shops on dairy farms in the zone (70 percent of the number needed). But of these no more than 90 percent operate at a high level of productivity and stability.

During the 11th Five-Year Plan the engineering service of enterprises and the subdivisions of Goskomsel'khoztekhnika [State committee of the agricultural equipment association] must seriously work on supplying feed shops with highly efficient grinders and mixers and on bringing all feed-preparation points into working order on small farms in order to feed all straw and other coarse feeds in prepared form.

Increased hay procurement, especially of better quality hay, is an important element of feed production for the dairy herd. Where possible the proportion of root crops should be increased in rations for cows. There is no need to discount the utilization of valuable possibilities for green mass during the short Siberian summer. However, in the near future the development of stable feed supplies with the use of feed shops (from September to June) must become the foundation for the dairy herd. Only in this case will we achieve stable growth in the productivity of cows on large farms (over 500 cows), which are in the majority here.

The lack of nutritional balance in rations results in the fact that the zone's enterprises continue to expend large rations for milk production (over 1.4 feed units). The main reason for this is the shortage of protein. For the continued growth of productivity it is essential to increase its ratio in rations (no less than 20 percent). There are several ways in which this problem can be dealt with. The main thing is to increase the production of feed protein, by expanding the area in legumes and improving their productivity. Nevertheless, legume production in the zone is proceeding very slowly. Enterprises are timid in introducing peas, vetch and rape into the structure of feed crops.

Another way to increase protein in rations while at the same time decreasing the expenditure of concentrates is to use rations that are based on high-quality voluminous feeds. Increasing the level of dry substance in corn silage by 1 percent is equivalent to a savings of 1 kilogram of concentrated feed per animal per day. For this reason the preparation of high-quality voluminous feeds--corn silage with a 25-36 percent content of dry substance, silage enriched with nitrogen-containing substances and haylage and hay from cereal grasses, as well as the procurement of mixed silage are important factors in increasing the products from livestock raising and in decreasing their costs. Mixed fodder that is prepared with quality is eaten well by all types of agricultural animals and birds and can replace up to 15-25 percent of concentrated feeds in a ration with success.

In addition to improved feeding, the effectiveness of dairy farming can be improved by solving a number of problems related to the use of animals. This concerns the raising of primipara heifers primarily. In raising replacement heifers we should orient ourselves toward a live weight of 350-360 kilograms at the age of 1.5 years, and this goal is totally realistic for the zone. Without solving this problem we cannot count on a considerable increase in productivity. In 1982 the zone's enterprises dealt poorly with the raising of heifers. In Krasnoyarsk Krai the average live weight of heifers at insemination was 302 kilograms and age--20 months; the respective figures for Irkutsk Oblast were 310 and 21, Chita--302 and 22, Buryat ASSR--320 and 22, and Tuva ASSR--300 and 22.

The specifics of dairy farming involve the close physiological ties between lactation and the reproductive process. For increasing productivity the activation of all parameters of reproduction is very significant. Also important is the duration of the intercalving period. Its optimal duration is 12 months. A great deal of attention should be given to regulating the dry period. Up to 30 percent of enterprises encourage a dry period of over 90 days.

In recent years the level of rejection of cows has increased to 20-25 percent and consequently the average duration of service has decreased to 4-5 lactations. It would be desirable to be rigorously selective regarding primipara heifers according to their productivity and to utilize the remaining cows to the maximum. But in doing this the herd should not contain a large proportion of old cows with low productivity.

Extensive shortcomings in the use of animals are related to a great degree to the absence of a differentiated approach to the use of various sex and age groups. This problem can be dealt with by means of the flow-shop system of milk production, which is still being slowly assimilated in the zone's enterprises. Its introduction is not tied to extensive capital investments but instead depends on a clear organization of labor and management and on accounts and analyses of the productivity indicators of animals.

At the present time each dairy farm should have a birthing department that is either newly built or renovated from existing facilities for the purpose of specialization. On their basis the opportunity will then arise to organize reproduction and milking shops. At the present time there are still too few birthing facilities and health centers for calves in the zone's enterprises.

Because of this shortage herd reproduction suffers and difficulties arise concerning the preservation of calves. At the same time, almost all rayons have had experience creating health centers and developing the technology for raising calves. Nevertheless, progressive experience with regard to feeding and maintaining calves up to the age of 1 year is not being widely utilized.

Each year the main branches of cattle raising decrease their economic effectiveness considerably as a result of the low level of herd reproduction. During the years of the 10th Five-Year Plan the zone average for calves produced per 100 cows did not exceed 80 calves, and in the enterprises of Buryat ASSR--75 calves and Tuva ASSR--60 calves. Many enterprises have produced low results in calf production during the first 2 years of the current five-year plan.

Intensive cattle raising in the zone is being hindered by poor conditions for raising calves, especially replacement heifers. The pace for introducing heifers into the main herd is insufficient for the necessary weeding of the herd according to productivity and for replenishing the herd as required. On the average in the zone 21-22 heifers per 100 cows are introduced at the beginning of the year. This is clearly inadequate in view of the complicated veterinary-sanitation circumstances of many kolkhozes and sovkhoses in which each year it is necessary to write off a large number of adult cows in order to protect the herd from infectious diseases. For a number of years the enterprises of Chita Oblast and the Buryat ASSR have expended up to 24-26 percent of their herds. The fallacious practice of the unjustified slaughter of cattle for intra-enterprise needs still exists. In 1982 stable sales outside of sales to the state comprised 58,300 head or 18 percent of the total herd of cattle sold to the state in the enterprises of Krasnoyarsk Kray; in Irkutsk Oblast the corresponding figure was 16 percent.

The level of breeding work should also be considered in dairy farming. In East Siberia the Simmental breed is the main one in the majority of enterprises. Recently many enterprises of foothill regions have been actively working on crossing the Simmental and Black Spotted breeds. This is the right direction and for this reason the specialists who are doing this work will win timewise as well as in production indicators. Unfortunately, the enterprises of Krasnoyarsk Kray and Irkutsk Oblast, which have sufficient numbers of Black Spotted livestock, highly valuable breeding bulls and the essential seed reserves, are being timid in conducting this work and essentially are not utilizing their own base. The importing of Black Spotted heifers from western regions is not justified and their resources are limited. In this regard we should give some attention to the work being done in Chita Oblast to cross cattle with breeding bulls of the Black Spotted breed. The matter of improving breeding work in dairy farming is accessible to all suburban enterprises in the zone and must be dealt with by them during the current five-year plan. This applies in particular to enterprises that are located near developing industrial cities and complexes in East Siberia and the BAM [Baykal-Amur Trunk Line] zone.

A serious hindrance to increasing labor productivity in dairy farming in the kolkhozes and sovkhoses of East Siberia is the low level of mechanization on

farms. Even the provision of drinking water for cattle is mechanized by only 25-30 percent in the Tuva and Buryat ASSR's, and the level of mechanized milking does not exceed 36-42 percent. The complex mechanization of dairy barns comprises only 18-19 percent in these republics. The renovation of dairy farms is proceeding slowly in the enterprises of the southeastern rayons of Chita Oblast and in most of the sovkhozes of the Tuva ASSR. In recent years many facilities have been built here, but the planning of the interior does not allow for the mechanization of the basic labor-consuming processes. Cattle is housed in modern facilities, but the technology for maintenance remains antiquated.

During the 10th Five-Year Plan several large complexes for milk production were built in the region. On each of them measures were elaborated on feed production, on the use of feed and the makeup of the herd and on providing technical services. The only trouble is that these measures are being realized very slowly and unsatisfactorily. Complexes are not supplied with cattle, are poorly supplied with feed and show very low production indicators.

For many enterprises of East Siberia cattle farming for meat purposes is the main branch. Specialized farms are located primarily in steppe, mountainous and northern regions in Chita Oblast, Khakhsiya, Buryatiya and Tuva. They have sufficient numbers of natural pastures but have a shortage of workers and for this reason are insufficiently developed. The quantity of beef cattle in the enterprises frequently depends on the mood of individual directors of enterprises. Specialized beef cattle farming is being replaced by the creation of so-called "meat herds" from low-productivity cows of dairy breeds and rejected heifers. Moreover, in some enterprises depending on existing circumstances some of the cows are in meat herds and when necessary are moved to dairy herds and vice versa. Because of such an unstable position held by directors in a number of regions the foundation for pedigree beef cattle has been lost.

In 1975 in the zone's enterprises as a whole there were 65,000 cows in the beef cattle herd. By the end of 1982 there were 56,000 cows. The quantity of cows has decreased from 18,000 to 12,000 in the enterprises of Chita Oblast, from 26,000 to 23,000 in the Buryat ASSR and in the Tuva ASSR of 18,000 beef cows 5,000 have been transferred into dairy herds.

Beef cattle farming is a specialized branch and it should not be viewed lightly. A scientifically-based technology for beef cattle farming includes three independent technological elements--the reproduction of the herd and the raising of calves until weaning-feeding, the maintenance of beef cattle and specialized breeding work. Many directors and specialists of enterprises do not give enough significance to these important factors. Frequently questions of branch management are decided according to the technology for dairy farming. Shortcomings in herd reproduction are tolerated. The output of calves is low and calving takes place on a year-round basis, which does not allow us to achieve the preservation of calves.

In the future, when organizing beef cattle farming as an independent branch on the basis of individual farms, specialized sovkhozes with a meat direction

should be created. On farms and in complexes for beef cattle with completed herd turnover there should be no less than 40 percent cows. An important element in the technology of beef cattle farming in East Siberia is the effectiveness of introducing seasonal calving, with the largest quantities of calves being produced in the winter and early spring. For this we need the corresponding facilities. A decisive condition for the successful management of beef cattle farming is full-value feeding, especially during the winter and early spring. Promising in this regard is the creation of sown pastures in annual cereal-legume grasses and the cold storage of green fodder for fall and winter feeding. In order to increase the herd of beef cattle in the region it is essential to create an additional 6-8 new breeding enterprises for the breeds regionalized in East Siberia.

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#### Recommendations Offered

Omsk ZEMLYA SIBIRSKAYA, DAL'NEVOSTOCHNAYA in Russian No 10, Oct 83 pp 28-30

[Article by A. P. Kuzovlev, director of ZabNITIOMS [Transbaykal Scientific-Research Technological Institute of Sheep Farming and Meat Cattle Raising], candidate of agricultural sciences and meritorious zootechnologist of the RSFSR: "The Goal--to Increase Production"]

[Text] The proportion of production from cattle raising increased constantly in the total volume of agricultural production in Chita Oblast as a whole and in livestock raising in particular during the past decade. Whereas in 1973 the proportion of products from cattle raising in the total volume of agricultural production comprised 19 percent, in 1982 it comprised over 26. This tendency will continue into the future.

In the oblast cattle raising is being developed basically to satisfy intra-oblast needs in milk, dairy products and beef. As a result of the building and development of the BAM zone as well as of the growth in population these needs will continue to increase and will be met primarily by means of a growth in the productivity of animals. Thus, beef production will increase by 33.5 percent while the general increase in the herd of cattle by 1990 will equal 21 percent. Milk production will increase by one-third while the dairy herd will increase by 22 percent. It is planned to increase the output of the cattle herd to 418,000 head of cattle by 1985 in kolkhozes and sovkhoses, and to 490,000 head by 1990, including 144,000 and 165,000 cows respectively.

The practical fulfillment of the goals for the development of cattle raising as indicated by the Food Program requires the immediate fulfillment of an entire complex of organizational-administrative, veterinary-zootechnical and agronomic measures in the oblast's kolkhozes and sovkhoses. Nevertheless, the main condition for the further improvement of livestock raising is the solution of the feed problem.

During the 10th Five-Year Plan 13.2 percent more feed was produced in the oblast than during the Ninth Five-Year Plan. Average annual procurement of coarse feeds increased by 295,000 tons, including hay--by 20 percent and

haylage--by a factor of 3.8. However, in the face of a general increase in feed production supplies per standard head of cattle continue to remain inadequate. Thus, on the average during the last 3 years feed procurement for cattle comprised only 13 quintals of feed units per standard head. The existing structure of feed rations also does not meet zootechnical standards.

There has been a sharp drop in the production of succulent feeds in the enterprises of Zabaykal'skiy, Baleyskiy, Akshinskiy, Kyrinskiy and Olovyanninskiy rayons and the Aga Buryat Autonomous Okrug. Supplies are somewhat better in Shilkinskiy, Nerchinskiy, Uletovskiy, Priargunskiy, Mogoytuyskiy and Chernyshevskiy rayons. The further development of cattle raising in the oblast urgently demands increasing the productivity of corn to 140-150 quintals per hectare as compared to 100 quintals per hectare during the ninth and 65 quintals per hectare during the 10th five-year plans, and the procurement of silage per dairy cow should increase to no less than 50 quintals.

Scientific studies have determined that feeding the dairy herd root crops normalizes the sugar-protein ratio, raises the capability of cows to utilize more silage and haylage, and improves the utilization of feed, increasing milk yield to 15 percent. In connection with this the rations of dairy cattle should contain from 2 to 5 percent root crops depending on their level of productivity. In actual fact in most enterprises turnips and kuuziki [feed turnip] are totally absent. In 1982 the sowing area for root crops in the oblast as a whole comprised only a total of 1,800 hectares. Their gross yield per animal comprised only 64 kilograms, and Priargunskiy, Gaz-Zavodskiy, Mogoytuyskiy, Nerchinskiy and some other rayons do not cultivate them at all. It is true that these crops are quite labor intensive to cultivate, but they can and must be grown in Transbaykal conditions. There has been some experience in doing this.

At the present time coarse feeds occupy a significant place in cattle rations--29.3 percent. Unfortunately, most of their content consists of straw. The dairy herd is fed not much more than 3 quintals of hay per cow in the course of the entire stall upkeep period, and in Mogoytuyskiy, Dul'durginskiy and Shilkinskiy rayons the corresponding figure is only 1.3-1.9 quintals per cow, or 1-1.5 kilograms per day.

The oblast's kolkhozes and sovkhoses take most of their hay from natural haylands. Improved haylands occupy only about 7 percent of the total haylands. For this reason the basic direction for increasing the hay harvest involves the surface and radical improvement of natural haylands. It is essential to radically improve 135,000 hectares of land, to irrigate 15,000 and to provide surface improvements for 500,000 hectares during this five-year plan. This will provide us with the possibility of producing over 350,000 tons of hay by 1985.

By the end of the current five-year plan the sowing area for perennial grasses should be increased to 250,000 hectares, including up to 40,000-50,000 hectares in legumes, which will enable us to produce 350,000-370,000 tons of hay. To do this we must first of all organize the seed farming of perennial grasses

well. In recent years our institute has been fulfilling its quota for the production and sale of elite seed of perennial grasses with stability. However, this is not enough, and seed-farming enterprises that are called upon to deal with this specifically practically do not fulfill the goals assigned to them. The creation of the Areyskaya Seed-Farming Station is being prolonged without justification.

Crops of annual grasses for hay, which are well-justified in the oblast, must be cultivated on 300,000 hectares, enabling us to procure almost 350,000 tons of hay.

Very little attention is given to the quality of feed. Thus, the oblast's agrochemical laboratory assigned only 34 percent of the hay from the 1982 harvest to the first class, 27 to the second, 32 to the third and 7 to the no-rating class. Zootechnologists and veterinary specialists of enterprises, together with the agronomist service, must be actively involved in the quality of procured feed, and the planning and accounts service must bring into action all aspects of economic stimulation.

The developed technology for preparing haylage enables us to preserve its sugar content and for this reason it is not a sour but a sweet feed that all types of animals like to eat. Scientific studies have shown that when feeding cows 1,000 kilograms of grass from good meadows in the form of hay (dried on the ground) it is possible to produce 80 kilograms of milk, whereas when the same quantity of hay in the form of haylage is used, 262 kilograms can be produced. However, this is possible only with a careful observation of the technology for haylage procurement. In practical terms a large portion of the haylage procured in the oblast does not differ from silage since during procurement the very same technology is used for both. Thus, according to data from the oblast agrochemical laboratory, of the 270,000 tons of haylage mass checked only 57,000 (21 percent) was assigned to the first class, 13 to the second, 15 to the third and 51 percent was not assigned to any class.

Pasture feeds, which involve 50 percent of dairy production in the oblast, occupy an important place in feeding cattle during the summer period. Our studies have established that the creation of a green conveyor enables us to prolong the pasture season for cattle from 80 to 130 days. The most appropriate for our oblast is the mixed type of green conveyor, in which natural pastures are utilized in conjunction with artificial and with crops from field feed production.

One of the most urgent problems in livestock raising here is, as before, that of providing feed protein for animals. Because of rations that are not balanced according to protein alone we underproduce milk and meat by 25-30 percent. In many enterprises over 2 feed units instead of the standard 1.3-1.4 are used for the production of 1 kilogram of milk. With the goal of eliminating the shortage of feed protein the sowing areas everywhere should be adapted to the requirements of the zonal system of agriculture by significantly expanding the area in high-protein crops, one of which is spring rape, which occupies over 83,000 hectares in the oblast.

Under conditions of intensifying cattle raising a great deal of attention should be given to the preparation of feed. We know that the degree to which animals utilize feed is determined to a large extent by its palatability, which depends on the method and degree of preparations for feeding. Science and practical experience have established that the preparation of full-value feed mixtures encourage greater consumption. The feed mixture for dairy cattle should include 40-50 percent silage or haylage, 10-20 percent root crops, 20-30 percent straw that has been pre-treated, 10-20 percent concentrates and the corresponding number of protein-mineral supplements. Considering the fact that most enterprises in the oblast still have a limited assortment of feeds, more extensive use should be made of liquid feeds, which facilitate the increase in milk output.

The most important aspect of breeding work in cattle raising is improving breed and productivity qualities. In the oblast work is being done with three types of cattle--dairy, dairy-beef and beef. Dairy cattle is represented by the Black Spotted and Kholmogor breeds, dairy-beef--by the Simmental breed, and meat--by the Kazakh White Faced, Kalmytsk and Hereford breeds. At the present time the Simmental breed comprises 86 percent of the total productive herd. By 1990 its proportion will drop to 74 percent. For this reason further work with Simmental cattle to improve feeding and upkeep (primarily winter) will provide a dependable basis for increasing gross production output of milk and beef.

In recent years cattle of the Black Spotted breed has begun to increase in the oblast. The increase in the Black Spotted cattle (planned to increase to 14 percent in 1990 as compared with 3.6 in 1982) can be explained by the fact that this breed is more adaptable to machine milking and surpasses the Simmental breed by 500-800 kilograms in the level of milk productivity under regional conditions. However, these advantages are evident only in enterprises where good conditions are created for maintaining the animals and where a sufficiently high level of feeding is available. For this reason the selection of a breed to reproduce in an enterprise should be approached scientifically. A decision of the oblast executive committee has determined 50 enterprises that will breed Black Spotted cattle. This decision is still being realized slowly.

The basis for achieving maximal production output in cattle raising involving milk and beef is the correct organization of herd reproduction. We know that each cow can produce a calf every year. This is what is done in the Pobeda Kolkhoz of Baleyskiy Rayon, where each year no fewer than 95 calves are produced per 100 cows and heifers. In the oblast as a whole gross output of calves does not exceed 70 percent, and commercial output is even lower. Calculations show that each year about 30,000 female cows in the oblast do not produce calves. Losses resulting from the upkeep of barren animals comprise over 40 million rubles. There is an especially unfavorable situation involving the reproduction of cattle in Dul'durginskiy, Akshinskiy, Olovyanninskiy and Khilokskiy rayons, where each 100 females produce only 53-63 calves. The main reasons for the low output of calves are the non-full value feeding of animals, the unsatisfactory level of zootechnical and veterinary-prophylactic work and shortcomings in the organization of pairing of animals in general and of artificial insemination in particular.

In conducting artificial insemination we were more concerned with increasing volume (although even here we did not achieve great success--only 59 percent of the mating herd is inseminated) than with quality, which had a negative effect on the reproduction of the herd and on its pedigree and class composition. It is important for us to expand the volume of artificial insemination and to work persistently on its quality.

We know that a large role in improving the herd belongs to pedigree bulls, which are evaluated according to the quality of their progeny. The pace of genetic improvements of the herd utilizing pedigree bulls is 2-3 times greater than with regular mass selection according to parentage. Nevertheless, work to find pedigree bulls is still proceeding slowly in the oblast.

The status of breeding work does not meet contemporary requirements for the development of cattle raising. Breeding enterprises and farms can meet the needs of our enterprises for pedigree products by only 50 percent. In the oblast there is only one breeding sovkhoz, Zastepenskiy, for 300,000 head of cattle, and even it has a low milk output in its own herd of dairy cattle. Our first task in further intensifying cattle raising involves the creation of our own breeding base. We must alter existing cattle breeding farms and reexamine their composition, for some of them have not been adhering to their specifications for a long time. We must consider how to utilize the great genetic potential of cattle from the Baleyskiy, Byrkinskiy and Ablatuyskiy sovkhozes and from other enterprises that do not belong to the agro-industrial association.

No less important to intensifying cattle raising is the directed raising of replacement calves. Each enterprise must organize the full-value feeding of calves during all upkeep periods and must achieve an average daily weight gain of at least 500-600 grams as compared with the 320 grams being achieved in the oblast at the present time.

The introduction of industrial technology for milk production on kolkhoz and sovkhoz farms makes new demands of breeders. At the present time it is not enough to improve the herd in the direction of increasing milk output and fat content in milk. Breeders should consider the suitability of cows for machine milking, reimbursing feed with products and resistance to disease.

The linear-group method should become the basic method of selection in commercial herds. Breeding bulls should be pure-breed and high-class and the mothers of the bulls should surpass the other cows in the herd by a factor of no less than 1.5 in productivity and by 0.2-0.3 percent in fat content of milk. In pedigree herds the basic selection method is the individual method and in accordance with the plan of selection-breeding work cows should be assigned to bulls.

The success of breeding work is unthinkable without a constant renewal of the herd by rejecting animals that have a low productivity and that do not meet the requirements of industrial technology. In enterprises there should be a transition to intensifying the pace of reproducing animals. We must increase the introduction of primapara heifers into the herd to 20-25 percent instead of the 15-18 percent existing today.

The creation of control-breeding yards or individual groups for the preparation of heifers, for increasing the milk yield of primipara heifers and for their evaluation as regards productivity and suitability for machine milking must become an important element in the technology of managing dairy livestock raising. However, of the 460 commercial dairy farms in the oblast only 24 have control-breeding yards as of yet. No significance whatsoever is attached to this in the enterprises of Kalganskiy, Nerchinskiy, Olovyanninskiy and other rayons.

A special role in the preparation of heifers for commercial use must be played by specialized enterprises and farms. Four of these have been created and are operating in the oblast. The plan for the sale of heifers assigned to these enterprises is not being fulfilled.

In recent years a new organization of milk production--flow-shop--has begun to be assimilated on commercial dairy farms in the oblast. The effectiveness of the given technology is evident. Nevertheless, its introduction is proceeding extremely slowly. According to a decision of the oblast executive committee, by 1985 there should be 60 such farms, and at the present time only 12 are in operation.

A large portion of dairy products are produced in the winter and for this reason the proper selection of a system for maintaining cattle is very important. On oblast farms two systems are utilized--tethered and untethered. Tethered is successfully used in the experimental enterprise of ZabNITIOMS. Feed distribution is mobile, milking is through milk lines and manure is removed by a scraper transporter. Untethered upkeep has been successful in the Pobeda Kolkhoz of Baleyskiy Rayon. On farms with this type of upkeep milking is performed by Tendem or Yelochka type equipment and mobile transporters are used to distribute feed and remove manure. The selection of the more effective technology for the upkeep of cattle must be made by specialists with a consideration of the specific conditions in the enterprise.

The greatest shortcoming in the organization of winter upkeep of cattle in most of our enterprises, especially those in the southeastern regions, is that animals, including dairy cows, are kept outside for the entire day. It is understandable that in view of this it is impossible to increase productivity to more than 3-4 kilograms during the winter period. Specialists understand all of this, but take no measures to eliminate this shortcoming. The force of habit is strong and an effort must be made to move away from it immediately and to introduce real stall upkeep of cows and to curtail the freezing to death of animals.

Beef cattle farming is a relatively new branch in the oblast. It is based on reproducing the Kazakh White Faced, Kalmytsk and Hereford breeds of cattle. Its development at the present time is determined to a large extent by the productivity of the dairy herd and the level of fulfillment of the state plan for milk procurement. Previously beef cattle farming was developed extensively. In 1976 the herd reached almost 50,000 head. In subsequent years in connection with the drop in productivity of the dairy herd the beef herd began to be curtailed. At the present time it consists of 32,500 head, or 10.2 percent of

the total number of cattle. The plan for breeding work foresees that beef cattle must be raised in 24 enterprises primarily in the steppe and mountain-taiga zones, with a total herd of 55,000, which comprises 12 percent of the total herd of cattle in the oblast.

Under Transbaykal conditions cattle is fattened in the winter on open platforms. Our long-term studies have shown that in East Siberia open fattening lots should be utilized only during warm periods of the year and in winter calves being fattened should be housed in closed facilities. For this in addition to the building of new facilities it is recommended that any facilities be adapted for this purpose--earthen trenches, sheepyards, facilities with filmy coverings. With the maintenance of cattle in closed facilities when the temperature is lower than 15-20 degrees the savings on feed comprises 20-35 percent.

In our enterprises the problem of supplying cadres for livestock raising has not been completely solved. At the present time almost 900 milkmaids are needed to work on commercial dairy farms; positions as cowherds are 86 percent and as calfwomen are 87 percent filled. The majority of farm workers are women over 30. We know that the degree of securement of cadres in livestock raising (especially of young people) depends to a large degree on the level of mechanization of labor-intensive processes. At the present time in kolkhozes and sovkhoses manure removal is mechanized by only 40 percent, feed distribution--by 31 percent, and milking of cows--by 50 percent. Because of this the production of 1 quintal of milk requires that kolkhozes and sovkhoses expend an average of 10-12 man-hours as compared with the 5-6 in the best enterprises of the oblast. The introduction of comprehensive mechanization in cattle raising will provide us with the opportunity to increase the cattle load per worker and to increase labor productivity.

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## LIVESTOCK

### URAL REGION MEAT, MILK PRODUCTION REVIEWED

Moscow SOVETSKAYA ROSSIYA in Russian 7 Dec 83 p 1

/Review by specialists of the RSFSR Ministry of Agriculture: "On Farms in the Urals"/

/Text/ Similar to the Russian Federation as a whole, milk production in the Urals region this year is increasing at a higher rate than was the case last year. The annual plans for milk purchases have already been fulfilled in Perm Oblast and in the Bashkir ASSR and they are close to achieving this goal in the Udmurt ASSR. More meat is being procured in the region than was the case last year and the plan for wool purchases has been completed.

At the present time, the livestock breeders in Sverdlovsk Oblast are ahead of others in terms of a complex of indicators: over a period of 10 months they obtained an average per cow milk yield of 2,419 kilograms, 237 more kilograms than last year and they are completing their plan for selling milk and also meat to the state. They converted their cattle over to indoor maintenance in a timely and well-organized manner and they carried out fine repairs on their livestock facilities. The oblast's requirements for grain forage have been met by only two thirds and yet it has ample amounts of hay, haylage and silage, with a large portion of these feeds being of 1st or 2d class quality. The feed preparation shops are being operated on a continuous basis and this was one of the chief reasons why a fine productivity was achieved for the cattle in October and November. There are farms where the summer milk yields were maintained throughout the autumn and into the beginning of winter. For example, more than 13 kilograms of milk are being obtained daily per animal at the Ordzhonikidzevskiy Sovkhoz. This is quite proper. The daily ration for cows on its farms includes 25-30 kilograms of a rich feed mixture, the increase in the milk yields of the cows was well organized and the livestock breeders are working a double shift on a 5-day work week basis.

The growth in the production of livestock products on farms in Uralskiy Rayon is readily apparent. However, the rates for this growth are lagging behind the all-republic rates in both dairy and beef cattle husbandry. Meat sales constitute the most complicated phase of the work. Although Kurgan, Perm and Chelyabinsk Oblasts have fulfilled their plans for selling meat to the state by 90 percent, in Orenburg Oblast and the Bashkir ASSR meat sales are lagging noticeably behind other contributors, when actually they should be providing more than 40 percent of all meat being obtained from the Urals region.

On many farms, with a conversion being made over to winter maintenance for the animals, a reduction has taken place in their productivity compared to the same period for last year.

At the present time, Kurgan Oblast does not appear to be yielding any ground to any of the remaining oblasts, despite the fact that here the milk yields are 200 kilograms less than the average for Uralskiy Rayon. A month after the commencement of the wintering campaign, almost 40 percent of the feed preparation shops on Kurgan farms were inactive and a large portion of the feed was issued in unprepared form.

The many failures are explained by the fact that the farm leaders are not devoting proper attention to the needs and requests of the livestock breeders or to their working conditions. This is apparent in the case of the Kayasanovskiy Sovkhoz. At its dairy farm in the village of Pritchino the cows are fed on an irregular basis, the facilities are damp, cold and dirty and the roads are in unserviceable condition. Trade in the necessities of life has clearly not been organized in the village and its residents are not being adequately supplied with fuel or drinking water. Many difficulties are being encountered in connection with medical services. Is it ever visited by the management of the agroindustrial complex? If so, why is it that no measures have as yet been undertaken?

It is noted that the feed situation is better in other oblasts in the Urals region and yet this should not give any cause for complacency. Nevertheless there are still feed shortages and literally each kilogram must be utilized in a thrifty manner if the proper return is to be realized. It is not an exaggeration to state that at the present time the fate of the milk yields and weight increases is being decided in the feed preparation shops. Nevertheless, in a number of rayons almost one half of them are under lock and key. It is known that the calcination of straw and treatment with liquid ammonia serve to raise the quality of the feed. This method is available literally to each and every farm. Despite this fact however, it is for some reason being neglected in Orenburg and Perm Oblasts.

The overall progress achieved in animal husbandry has been noted most of all in an increase in the number of offspring being obtained: an increase, for example, of more than 7 percent in the number of calves. This has resulted in an acute shortage of birthing departments and facilities for young stock. The kolkhozes and sovkhozes in the Urals region have not been adequately supplied with such facilities. In the Udmurt ASSR, for example, only one half of the required facilities are available. There is also a shortage of calfhouses and veterinary dispensaries in Perm Oblast. The problem with regard to the disposition of cows has still not been solved completely. This is delaying the introduction of a progressive flow-line departmental system for milk production; as yet, it is being employed on only one out of every ten dairy farms.

This present livestock wintering campaign, as always, is accompanied by difficulties. Nevertheless, a real opportunity exists in the Urals for achieving greater growth in the production of livestock products. This opportunity must not be overlooked.

## REGIONAL DEVELOPMENT

### LIVESTOCK SECTOR PROBLEMS OF NORTHERN ECONOMIC REGION

Moscow SEL'SKAYA ZHIZN' in Russian 26, 27, 29 Nov 83

[Article by M. Glinka, V. Okunev and I. Selivanov, northern economic region:  
"Problems of Northern Farms"/

[26 Nov 83 p 2]

[Text] It is known that a man's character is displayed best of all during extreme circumstances: a hero is often negligent and boisterous during dangerous situations and yet in everyday life genuine heroism is manifested by individuals who are quiet and inconspicuous. The same can be said regarding zootechnical and technological decisions: methods which arouse no doubt under conventional conditions do not perform well under a stern climate or low soil fertility conditions. This is why we visited farms in the northern economic region of the RSFSR, where farm management must be carried out under especially complicated conditions. This region includes Arkhangelsk, Vologda and Murmansk Oblasts and the Karelian and Komi ASSR's.

The northern region consists of one and a half million square kilometers of land. Here there are hundreds of thousands of head of cattle being maintained. Each year the region's complexes and farms furnish approximately 200,000 tons of meat and more than 1 million tons of milk -- a worthy contribution towards the country's milk and meat funds. The prediction made by scientist A. Zhuravskiy at the turn of the century has turned out to be true. He believed that the northern part of Russia would become a natural arena for cattle husbandry, butter-making and meadow culture.

#### 1. The Strain

An obelisk dedicated to the north has been standing in Arkhangelsk for almost half a century. On the four sides, four figures are carved in the granite: a timber jack, fisherman, hunter and milkmaid. The obelisk honors the work performed by those people who uncovered the riches of the stern land found here.

Alongside the milkmaid stands a cow -- of the well known Kholmogorka strain. This strain has been supplying milk for the timber jacks, hunters and fishermen for more than one century. The area it is found in is extensive -- from the Moscow region to Siberia and from the Kama to the Amur Rivers. Dairy cattle husbandry is the chief branch of agriculture in the oblast, with the economies of the majority of the kolkhozes and sovkhoses in Arkhangelsk Oblast being dependent upon the sale of milk and pedigree young stock. Each year the oblast's breeding association sells approximately 3,000 young bulls and calves beyond the limits of the oblast and still it is by no means fulfilling all of the requirements.

Such popularity is not surprising: the Kholmogorka is one domestic strain which has not been affected by foreign cattle. For centuries it has been bred in a pure sense and this accounts for its high breeding qualities: Kholmogorka cattle possess strong consolidated inherited traits and these valuable properties appear in their offspring. Within the oblast, a great amount of work has been carried out aimed at improving this strain. The Arkhangelsk livestock breeders have succeeded in raising the productivity of the oblast's herd by almost 600 kilograms. Practically all of the cattle in herds here are pure-bred animals and it was only 15 years ago that the percentage was only 28 percent. The specialists are aware of how insignificant this period is -- 15 years for breeding work -- when the initial results of any breeding effort become known only after 3-4 years have passed.

The Kholmogorka strain is well adapted to the conditions found in the North. Aleksey Aleksandrovich Prozorov, a manager at the breeding center for this strain, believes that under the same conditions Kholmogorka cattle can compete against the best of the world's strains. The milk yields and returns being realized from feed in the case of Kholmogorka cattle are the same as those being obtained from the Black-Variegated and Hollandskiy strains, but distinct -- from these latter strains they are not subject to leukemia -- the scourge of modern dairy farms. Notwithstanding the present scanty feeding operations, the average annual milk yield for the strain exceeds 2,700 kilograms and in Murmansk Oblast it has reached 3,680 and in the Karelian ASSR -- 3,370 kilograms. A Pecherskiy type of the Kholmogorka cattle strain has been approved for the Komi ASSR. The average milk yield for more than 3,000 cows turned out to be 4,303 kilograms. The animals of this type endure very well year-round indoor maintenance conditions, a factor which is of extreme importance under the conditions found in the North.

As is well known, the genetic potential of cattle is based upon the productivity of the best animals. There are many well known champions to be found among the Kholmogorka cows. Thus a cow by the name of Daisy furnished an annual milk yield of 12,000 kilograms and six more animals delivered from 10,211 to 10,712 kilograms each. At one time, yields of from 5,000-6,000 kg of milk were obtained from each cow in the better Kholmogorka herds. Valentina Mikhaylovna Minina -- an instructor attached to the Kholmogorskiy Rayon Party Committee -- informed us that at the present time 538 cows on farms throughout the rayon have productivities in excess of 5,000 kg annually and that it is not unusual to find cows having milk yields of 6,000-7,000 kilograms here.

However, by no means is full use being made of this potential. Even on breeding farms the annual milk yields rarely exceed 4,000 kilograms. For Arkhangelsk Oblast as a whole, the best result was obtained in 1975 -- 2,637 kg of milk per cow. But subsequently the productivity declined and slipped to 2,097 kg. The reason for this was generally obvious: a cow provides not only milk but also the qualities to be inherited. N.G. Grigor'yev, a Corresponding Member of VASKhNIL /All-Union Academy of Agricultural Sciences imeni V.I. Lenin/ who carried out a special study of the best Kholmogorka herds, wrote in this regard: "For the formation of milk, cows with high milk yields expended internal reserves of their organisms which could not be used without limits. Thus the animals could not manifest completely their genetic potential productivity."

Nor do we have in mind here the factor of scanty rations. To the contrary, at all breeding plants where 3,800-4,500 kg of milk are being obtained annually per cow, a considerable over-expenditure of feed per animal has been noted. But in order to obtain higher milk yields, it is not enough to feed a herd to excess; it must still be provided with certain substances in the required ratios. The rations lack energy, sugar, phosphorus and carotene and the optimum ratio between sugar and protein is not being followed. We wish to repeat that such a situation developed at farms which had adequate supplies of forage. And what about conventional farms where there is a shortage of feed? Replacement young stock are being raised on hunger rations. Workers at a breeding center, in Vologda Oblast and in the Karelian and Komi ASSR's explained that young bulls being made available for breeding purposes are constantly being underfed and this is resulting in the development of low productivity cows.

The Kholmogorka strain readily responds to proper feeding and any improvement in the ration is immediately repaid in the form of an increase in milk. Vasilii Nikolayevich Razhev, the manager of the Nizhnematigorsk Branch of the Kholmogorka State Breeding Plant, where this year, for the third year in a row, more than 4,000 kg of milk are being obtained per cow (a zootechnician at the branch, Yevgeniya Andreyevna Shpynova, confidently corrected the figure to being more than 4,200 kg), provided a brief explanation for this success: 1,000 tons of hay are being procured and almost all of it is pressed, one leaf after another.

The conclusion is obvious: in order to obtain the 3,000 kg of milk from an "average" cow in the oblast's herd, as planned for the immediate future, each cow must be adequately fed. A different decision was handed down in Arkhangelsk: here they view the solution as being one of crossing the Kholmogorka strain with the Holstein-Friesian strain. The work was carried out earnestly in the north: at first, approximately 23,000 cows and heifers were made available for crossing -- almost one fifth of the brood stock. Nor was the heart of the strain ignored, its breeding nucleus -- holsteins are being added to the breeding sovkhoses and plants, including to one of the best Kholmogorka herds -- at Matigory.

An improvement in cattle by combining the properties of various strains is not a new undertaking and in fact it is one that has been checked out very well. The zootechnicians are successfully employing the "merging of blood," with

the foreign bulls being removed from the herd after the first offspring have been obtained. Reproductive crossings make it possible to combine the properties of several strains in one new one. And finally there is absorptive crossing -- here we have in mind substituting another "absorptive" strain of cattle for a local strain. The latter method was employed in the Karelian ASSR, where of five strains bred earlier they decided to leave just one -- the Kholmogorka strain. The remaining strains, mainly hybrid cattle, were replaced by fat and milk Ayrshire cattle. Although the Kholmogorka strain is bred from a pure standpoint on farms where this is the planned strain, in the zone of Ayrshire cattle absorptive crossings are employed. This work was begun, the purpose of which was briefly described by the secretary of the Karelian Oblast CPSU Committee Nikolay Stepanovich Tikhonov as follows: "The chief intent 20 years ago was to obtain fine cows. At that time, the first 100 Ayrshire non-calving young cows were imported into the Sortaval'skiy Sovkhoz. This rule of immediately creating large groups of cattle and not dispersing valuable animals in small batches was subsequently adhered to. At the same time, improvements were carried out in the entire reproduction service by concentrating it at the central Petrozavodsk Breeding Station. The experience of Klavdiya Semenovna Giryeva, a reproduction technician at the Olonetskiy Sovkhoz who each year obtained not less than 100 calves from 100 cows, was disseminated on an extensive scale. Growth in the number of animals was delayed while concentrating efforts on raising their productivity. And the work progressed. The average milk yield for the republic was raised to 3,400 kg, with 86 calves being obtained from 100 cows -- both indicators are among the best in the Russian Federation. At the Sortaval'skiy Sovkhoz, judging from all appearances, the milk yield per cow this year will be not less than 5,000 kg, with the fat content exceeding 4 percent. The republic is selling the pedigree young stock at a great profit.

Success is readily apparent. But does this mean that the same path must be followed in neighboring Arkhangelsk Oblast? Indeed in the Karelian ASSR the Ayrshire herds are concentrated in the southern half of the republic where the soil is richer and the climate more moderate. However the northern regions here, just as in Vologda Oblast, are left for the Kholmogorka strain. But it bears mentioning that the conditions for the absorptive crossing of the Kholmogorka strain with Ayrshire cattle have not justified the hopes in all areas. On a number of farms in Pudozhskiy Rayon, for example, the fat content of the milk even declined.

"Actually, the Ayrshire cattle require an especially high production culture" stated the chief of the Department of Agriculture and Food Industry for the Karelian Oblast CPSU Committee Aleksandr Mikhaylovich Maksimov, by way of explaining the failure.

The same can be said regarding the Holstein-Friesian strain of cattle, which is highly productive beyond any doubt and which is also highly demanding with regard to feed and proper tending. And an important consideration is the fact that the use of absorptive crossing would lead to elimination of the Kholmogorka strain. During a recent meeting of the Board of the USSR Minsel'khos /Ministry of Agriculture/, it was no coincidence that this question arose or than an appeal was made to retain at least the name.

Meanwhile, a determination has still not been made in Arkhangel as to how to continue the work already commenced. "We will obtain first hybrids and then we will examine the situation" reasoned the local specialists, "Perhaps we will return to the Kholmogorka strain and perhaps in the future we will use Holsteins. In Velsk they obtained hybrids which are furnishing 1 more ton of milk annually..."

Such an experiment was truly carried out at the Velsk Sovkhoz-Technical School. And they realized an impressive increase in their milk yields. However...

"I would not place too much trust in these results" cautioned A.A. Prozorov, the deputy director of the Northwestern Scientific Research Institute of Dairy and Meadow-Pasture Farming, who it is recalled directs the breeding center for the Kholmogorka strain, "First of all, the experiment was carried out only on nine cows and the control and experimental animals were subjected to different conditions. Secondly, the difference was obtained during the first lactation and it is not known how the hybrids will behave in the future..."

These are sound doubts. At the Kurkino Experimental Farm at Vologda, a crossing was carried out between Holsteins and the Black-Variegated strain -- it can be stated that these strains spring from the same root. The hybrid first heifers furnished 4,662 kilograms of milk and their pure bred contemporaries -- 3,629 kg of milk with a fat content of 3.52 percent. And here the effect of the crossing was expressed in a 1 ton increase in milk, although its fat content decreased. But during the second lactation the difference in milk yields turned out to be more modest -- only 240 kilograms -- with a fat loss of almost 0.2 percent.

"We have had some sad experience" stated another Vologda scientist, Vladimir Nikolayevich Zhilov, "In recent years, the fat content of milk in the oblast has been constantly decreasing. To a large degree, this is the result of a reduction in the proportion of butter and fat yielding Yaroslavl cows in the herds.

"Thus are we not losing more than we are gaining?" continues Aleksey Aleksandrovich Prozorov, "The Holsteins provide not only a low degree of fat and a capricious nature with regard to feed and maintenance conditions but also a susceptibility to leukemia, which the farms do not know how to eliminate. Pure bred Kholmogorka cattle are not susceptible to this ailment and we remove sick animals from the lines having Black-Variegated ancestors. Extreme caution must be exercised when crossing Kholmogorka animals and in any case it must not be carried out at breeding farms."

Here it is appropriate to remember the words of VASKhNIL /All-Union Academy of Agricultural Sciences imeni V.I. Lenin/ Academician Ye.F. Liskun: "In the Kholmogorka cattle we now have a strain which, to a considerably greater degree than other strains, serves as a wonderful source for developing highly productive herds."

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[Text] 2. Feed. There is no need for discussing the importance of feed -- for in the absence of an abundance of it stable livestock husbandry operations

would be impossible. Improvements in a herd using the Holstein-Friesian strain, for example, is advantageous only in those areas where 40-50 quintals of feed units are available per cow. This year, prior to 1 October, that is, prior to the start of the indoor maintenance period, the forage supplies on Vologda farms amounted to 11.5 quintals of feed units per standard head of cattle according to information made available by the TsSU /Central Statistical Administration/, on Arkhangelsk farms -- 11.2, in the Komi ASSR -- 10 and in the Karelian ASSR -- 8 quintals of feed units.

But we are in no hurry to evaluate these results in a critical manner -- they are not inferior to the record results of past years and they were obtained under extremely difficult conditions. Only 1 percent of the land in the Karelian ASSR is suitable for farming. In Arkhangelsk Oblast, strips of floodplain land are surrounded by endless swamps on which cranberries do not grow every year. Even the wonderful Vologda meadows, which provided the name and fame for the butter obtained here, are being swallowed up by the vast forests. The low natural fertility of the local soils and the shortage of warmth are inhibiting even more the work of the farmers. And the results which they achieved were obtained by virtue of persistent labor.

"All of our farming is subordinated to the interests of the farms" stated A.M. Maksimov, the head of the Department of Agriculture and Food Industry of the Karelian Oblast CPSU Committee, "It is sufficient to state that forage crops occupy 80 percent of the areas being worked throughout the republic."

Feed production in the Karelian ASSR has been singled out as an independent branch and one which has at its disposal the necessary equipment, specialized feed crop rotation plans and modern storehouses for forage. Each year the land reclamation specialists introduce 5,000-6,000 hectares of arable land into the rotation plan. The return from these lands is increasing. For example, for several years now the Olonetskiy Sovkhoz has been operating with a one and one half year's supply of feed. Here they are relying upon the use of perennially sown grasses.

"We were able to expand our grass fields after the farm released land formerly used for the cultivation of grain crops, which quite often do not ripen under the conditions found here" stated the director of the sovkhos Nikolay Ivanovich Filimonov, "At the present time, 2,630 hectares are sown in grasses, more than one half of the arable land."

The Olonetskiy Sovkhoz is a well known farm. This was the location of the first Karelian MTS /machine and tractor station/. The sovkhos's field crop growers are not preoccupied with expertise. This year they succeeded in obtaining 20 quintals of barley from each of 100 hectares -- a fine addition to the ration for the sovkhos's herd, containing approximately 1,700 cows. But was this figure justified from an economic standpoint?

"No" stated Tamara Viktorovna Nikitina, "A quintal of grain costs us from 25 to 32 rubles and a quintal of hay -- 4 rubles and 10 kopecks; in a conversion for feed units it is cheaper by a factor of 3-4."

The concern of the sovkhos economist is understandable. Milk sales provide the Olonetskiy Sovkhoz with approximately 190,000 rubles worth of profit and

all animal husbandry -- almost 340,000 of the overall sovkhos profit of one and a half million rubles. And the welfare of the farm is dependent upon the cost of the feed and, it follows, upon the output obtained.

The meadow culture specialists at the Bol'shevik Sovkhoz accumulated some interesting experience. For more than 10 years in a row they have obtained 50-60 quintals of grass per hectare from grass tracts without replowing. Adequate quantities of seed enabled the farm to increase its sowing norm by a factor of 3-4 and to obtain a good stand of grass during the first year. And the strong and resilient sod is capable of supporting the grazing cattle and harvest equipment, even during the rainy period. The sovkhos director, A.M. Dzyubenko, proudly showed us tracts which were sown in grasses 17 years ago. The effectiveness of such a technology is best borne out by the milk yields: the sovkhos is obtaining 4,100 kilograms of the republic's cheapest milk from each of 1,100 cows.

The Olonets Plain, which is located in the southern portion of the Karelian SSR, supplies its farms with adequate quantities of cereal grass seed. The seed for leguminous grasses is quite another matter; they usually do not ripen here.

"As early as 1977, the RSFSR Minsel'khoz /Ministry of Agriculture/ issued an order requiring Rossortsemprom to supply 50 tons of single-cut clover seed annually" stated the deputy minister of agriculture for the autonomous republic Aleksandr Makarovich Trubetskoy, "But there was one strange development. Whereas up until this time we had obtained at least 25-30 tons of seed, during the year in which the order was issued not one kilogram was received. The same held true for 1979 and 1980. And over the past 3 years taken together a total of only 5.9 tons was supplied.

Grasses serve as the foundation for feed production in the North. According to Vologda scientists, the annual forage fund at dairy farms, which are in the majority here, must consist of no less than 29 percent coarse feed, including 14 percent hay, 25 succulent and up to 32 percent green feed. Concentrates should account for the remaining 14 percent. Based upon this fact, a decision was handed down in the oblast calling for a structure to be developed for the area under crops on each farm, with the farm requirements being taken into account.

Within the oblast there are many examples of well organized meadow culture operations. This includes the Rodina Kolkhoz, where each hectare of cultivate grazing land feeds three pedigree cows with annual milk yields of 4,200 kilograms for an entire summer. This also includes the Kurkino Experimental Farm, the perennial pastures of which furnish 7,000 feed units per hectare at a cost of 1.8 rubles per quintal. However, these examples tend to underscore more the unused reserves rather than the successes achieved.

"The grass grows by itself" we heard these words being expressed on more than one occasion. And it continued to grow by itself: meadow culture, as a feature of efficient land management, began to receive acceptance only in recent years together with the program for transforming the nonchernozem zone. Supporters of this program did not appear immediately or in all areas. Some

farms neglected their meadows as they concentrated their efforts on raising the productivity of their fields. And thus the task of obtaining grazing fodder is becoming more difficult.

"Our total amount of grazing land" we were told by the Vologda Oblast Executive Committee, "today amounts to just slightly more than 300,000 hectares, 200,000 hectares less than the amount we had several years ago."

Almost no increase has taken place in the oblast's perennial cultivated pastures: in 1975 there were 16,600 hectares of DKP /dolgoletnoye kul'turnoye pastbishche; perennial cultivated pasture/ and at the present time there are 18,000 hectares. The milking herd has increased considerably. And indeed grazing areas are required for the non-calving young cows and replacement young stock.

Formerly the Kholmogorka strain was a purely "grass" type of cow -- pasture-hay feeding. Today, at kolkhozes and sovkhoses in Arkhangelsk Oblast, there are 182,000 hectares of pasture land and only 15,000 hectares of perennial cultivated pasture land. Strictly speaking, the oblast has only two truly cultivated pastures -- at Matigory and at the Kotlas Experimental Station. It is by no means an accident that many farms are beginning to rely more upon the use of concentrates.

This did not produce success. To the contrary, the milk yields remained low and the health of the animals deteriorated noticeably. There was an increase in barrenness and throughout the oblast as a whole only 75 calves were being obtained from every 100 cows. At the Nizhnevatigory Department of the Kholmogorka State Breeding Plant only 74 calves were obtained per 100 cows. This figure has now been increased to 90 and the productivity of the herd is increasing. What changes took place here?

"Earlier our cows were provided with only 1.5 kilograms of hay daily" replied zootechnician Ye.A. Shpynova, "We are now placing 6 kilograms of hay in the feeding troughs and we are enriching the ration with turnips and potatoes. And the issuing of concentrates has decreased to 1-1.5 kilograms per head."

We have already discussed the results. For the third year in a row the department is obtaining more than 4,000 kilograms of milk from each cow.

Based upon the experience of this and other farms, the structure of the feed base is being changed decisively throughout the oblast. In order to increase the production of high quality and cheap feed, the decision was made to cut down the grain forage crops for haylage during the stage of milk-wax and waxy ripeness and to increase the production of hay, while reducing at the same time the laying in of silage from natural grasses.

This decision requires an explanation. The Arkhangelsk farms were released from having to sell grain to the state, with the chief goal of farming here being that of obtaining feed. It is completely obvious that farms that produce farm products must develop their feed production operations in a manner so as to be able to obtain as much milk and meat as possible from each hectare of land. And in determining the crop structure and in selecting the

forage procurement technology, the oblast's specialists were guided specifically by this requirement. In the northern region, perennial grasses furnish the greatest quantities of cheap nutrients per unit of area. Next year they will be grown on 100,000 hectares, 20,000 of which will be used for hay and 62,000 -- for haylage. For the most part, the natural haying lands (270,000 of 292,000 hectares) will be used for hay and the annual grasses -- for silage (20,000 of 25,000 hectares). There are 100,000 hectares of spring grain crops in the oblast; 40,000 hectares will be harvested for grain (including for seed) and the remaining 60,000 hectares will be cut down for haylage.

All of this will make it possible to procure 450,000 tons of hay compared to the present 360,000 tons and to have the same amount of haylage as is available at the present time -- 120,000 tons. The laying in of silage (using mainly grain forage crops, but harvested during different stages of ripeness) will be lowered twofold -- by 300,000 tons. Instead of this, 400,000 tons of grain haylage will be procured. The difference would not be quite as great compared to 300,000 tons of silage, but if it contained 54,000 tons of feed units then there would be 100,000 tons in the grain haylage.

Carbohydrates are obtained for the rations from sowings of fodder beets, carrots, potatoes and a cabbage-rutabaga hybrid, used as a substitute for turnips, while protein is provided by clover, maple peas, spring rape, lupine and cowparsnips. The overall yield of nutrients will increase from 378,000 tons this year to 555,000 tons next year. This amounts to 20 quintals of feed units per standard head of cattle. And a reduction in intermediate operations on a grain forage field that has been converted into a grain haylage field will furnish a savings of approximately 50 rubles per hectare -- for the oblast as a whole, a savings of almost 3 million rubles and up to 100,000 man-days. The practicality of the plans as outlined is borne out by experiments carried out at 13 farms, with 15,000 tons of grain haylage being placed in storage this year.

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/Text/ 3. Personnel

"Up until now, the chief cause of the lag in animal husbandry operations has been feed. But we will solve this problem and all of its attendant difficulties" we were informed by the secretary of the Vologda Oblast CPSU Committee Stanislav Aleksandrovich Osminin, "Changes will take place, the paths have been plotted and the work is proceeding. However the personnel problem is considerably more complicated."

The solutions for many of the problems of northern farms are dependent upon the personnel -- the shortage in personnel, the turnover rate and their skills. Considerably more feed is available, but the best natural grasses are now located dozens of kilometers away (over bad roads) from the central farmsteads, the equipment cannot be transferred there and there is a shortage of manual mowers. It is known that the profession of milkmaid requires a high level of expertise. However, when there is a scarcity of them it is necessary to assign any individual to this duty, even those who are not suited for it. In addition, double shift operations and five-day work weeks eliminated. Work must be carried out in the absence of days off and vacation time. A vicious

cycle develops -- a shortage of workers brings about a deterioration in the condition of farms and personnel tend to leave disorganized farms.

There are two methods for solving this situation: attract workers from the side or raise labor productivity so as to be able to cope with the increasing work volume using available resources. The first method leaves no room for doubt. Throughout the northern region housing is under construction, improvements are being realized in cultural and domestic services for the rural areas and solutions are being found for other social problems. We met a young couple at the Bol'shevik Sovkhoz -- a milkmaid and tractor operator from Arkhangelsk Oblast. What brought them to the Karelian ASSR, hundreds of kilometers from their home?

"We came to find work" replied the talkative spouses, "but we also wanted days off and vacation time..."

Work is the same everywhere. But at the Bol'shevik Sovkhoz the working and living conditions conform more to the modern requirements. At this farm, just as at a farm of the neighboring Sortavala Sovkhoz Technical School, there has been no requirement for additional personnel for some time now. And this comes as no surprise -- all of the required conditions have been created for the livestock breeders. Complete mechanization, showers, a therapeutic sauna and a heated swimming pool (there is one on the farm of the sovkhov-technical school) -- by no means are these facilities considered to be excess luxuries for personnel who are engaged in feeding and clothing the country.

At the Karelian Sovkhoz imeni Zaytsev, we saw a club for livestock breeders. The sovkhov's carpenters had restored an old and empty building by paneling and painting it and the building sparkled like a new one. In it they installed a recreation and reading room, a shower bath, a snack bar (60 kopecks for a complete lunch, 30 of which are paid by the sovkhov), a hall for study purposes and for holding meetings for the livestock breeders, a therapeutic sauna and a medical treatment room (the disease rate among the milkmaids has declined by one third). This club is largely responsible for the fact that we constantly encounter young people on the farm. Such work is being continued throughout the republic. The creation of clubs for livestock breeders has been included in the industrial-financial plans for many farms. Moreover, in addition to the livestock breeders working on the basis of double shift operations, 87 farms have also converted over to this regime, with their number increasing by 10-11 each year.

The rural areas in Arkhangelsk Oblast are changing. The secretary of the oblast CPSU committee, Il'ya Dmitriyevich Dolgikh, enthusiastically pointed out entire streets lined with new dwellings. The first keys for these homes are given as a rule to leading farm workers. Such "model" streets consisting of homes of different types of construction, planning and costs have been created in several areas. The plan is a simple one: the leader of any establishment can visit such a settlement, examine the situation, select the building type that best suits his taste and potential and commence construction -- all of the planning-technical documentation is prepared in advance. There is a broad selection: a dozen or more farmsteads on the same street and no two alike. There is only one similarity -- each farmstead has not only a house but also outbuildings for livestock and supplies.

People are attracted and pleased by all of this. There is only one area of doubt: are we not hurrying too much in our use of modern architectural forms, rejecting in the process the use of northern type buildings which have proven their worth through the centuries? These old peasant homes of various sizes and circumstances have been retained not only in museum-reservations -- Karelian Kizhy and the Arkhangelsk Malye Karely -- but also in many villages. They are based upon the efficient principle of "combining housing, livestock and feed as well as utensils" and they are shielded against inclement winter weather under a common roof.

Nonetheless the number of rural residents is gradually becoming stable. There are approximately 2,600 milkmaids in the Karelian ASSR, with the shortage in such personnel being only 80. City youth have begun submitting applications to agricultural professional technical institutes which train livestock breeders. At both Arkhangelsk and Vologda, there are farms which are completely staffed despite the fact that the city is located nearby. However the productivity of farm labor is increasing slowly despite the fact that complete mechanization has been introduced into operations in many areas. The average Karelian milkmaid services only 13-15 cows. Nor is the situation any better at many farms in Arkhangelsk and Vologda Oblasts. Such workloads make it difficult to solve the personnel problem. Moreover, low productivity labor is unprofitable -- the expenditures for paying for such labor in animal husbandry in the northern region occupy second place in the production cost structure behind the expenditures for feed.

It is known that labor productivity is increasing coincidental with the introduction of the industrial technology and industrial production methods. However an attitude of caution is being displayed throughout the region with regard to these innovations.

"Thus we are maintaining the present milk yields in the interest of ensuring that the complexes are not victimized by excessive enthusiasm" we were told in the Karelian ASSR.

"We are not concentrating more than 400 cows in one area" they told us at Arkhangelsk, "A greater number results in a loss in output."

Only in Vologda was another opinion expressed: "Notwithstanding other opinions, the process of concentration in animal husbandry is continuing..."

It is being carried out on farms in the Karelian ASSR. Eight hundred cows and 750 head of young stock are being maintained during the winter in the Shuya animal husbandry production district -- almost the entire herd of the Sovkhoz imeni Zaytsev. It was precisely here that they created a club for the livestock breeders, while at the same time they can only dream of such clubs at smaller farms. At the above-mentioned Bol'shevik Sovkhoz, approximately 3,000 head of cattle are concentrated at one "point" and at the Druzhba Sovkhoz -- 1,200 head. And there are many such examples. Such concentrations have made it possible for the farms to improve radically the working conditions of the livestock breeders.

Similar examples are to be found in Arkhangelsk Oblast. A complex of the Organizator Kolkhoz-Breeding Plant was the first to achieve its planned

capability. Although it is viewed throughout the oblast as an exception (there are 800 cows here and each milkmaid services 40 animals), zootechnician Yelena Georgiyevna Adamenko believes that the productivity is determined by the feed and not by the size of the herd or the technology employed. And she has proved this in her work. After the herd was transferred over to the complex, the milk yields of the cows increased. Many of the cows are now furnishing more than 5,000 kilograms of milk and the best in a group managed by milkmaid V.Ya. Ptashnik -- almost 7,000.

The North is rich in industrious people. This region gave the homeland not only Lomonosov, Batyushkov, the brothers Vereshchagin, but also thousands of wonderful workers who have transformed and are continuing to transform their stern and difficult land. Some of the labor accomplishments of milkmaids in this area are beyond comparison, milkmaids such as Mariya Vladimirovna Sundushnikova of the Kholmogorka State Breeding Plant, Galina Aleksandrovna Tikhova of the Vologda Molochnoye Sovkhoz, Mariya Stepanovna Kuz'menkova of the Sortaval'skiy Sovkhoz and many other masters of machine milking who, here in the North, are obtaining 4,000-5,000 kilograms of milk per cow. Mention should be made of the Kurkino OPKh /experimental model farm/, one farm of which obtained 4,321 kilograms of milk from each of 450 cows. This was by no means a record result and yet it was achieved in an extremely economic manner. Indeed, less than one and a half man-hours and 116 feed units were expended at the farm in order to obtain 1 quintal of output. Labor productivity here is several times higher than at any other farm in the northern region.

The flow line-departmental system of milk production is employed at the Kurkino OPKh. Each milkmaid services more than 100 cows, with high milk yields being obtained. Why is it that this progressive and economic system is not being disseminated on an extensive scale?

"We are still dividing up the feed and this is not suitable for industrial methods" such was the comment we heard in the Karelian ASSR and also in Arkhangelsk and Vologda Oblasts.

Yes the industrial technology, similar to any other employed in animal husbandry, requires a sufficiency of feed. But even more it requires good work organization and high quality work. There simply is no other way. On farms which employ the former milk production methods, the labor expenditures, despite an abundance of equipment, are unjustifiably high. Nor is the situation improved by all-round mechanization or by the system developed in the Komi ASSR for the production line maintenance of cows -- it did not turn out to be a workable system.

Certainly, this is not meant to imply that the introduction of an industrial technology for dairy cattle husbandry should be ruled out in all areas. No, it goes without saying. For it was mainly haste which at one time tarnished the reputation of the dairy complexes. But a definite need exists for intense propaganda and organizational work in connection with the consistent industrialization of dairy farms.

We traveled thousands of kilometers on roads in the northern economic region and we became acquainted with dozens and hundreds of people. These were

remarkable people, capable of accomplishing a great deal. They will accomplish even more if they are provided with assistance in solving certain urgent problems which, we are convinced, are also of concern to people who do not reside in the north.

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## REGIONAL DEVELOPMENT

### DISTRIBUTION OF AGROCHEMICAL CENTERS IN REGIONS OF AGROINDUSTRIAL COMPLEX

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/Article by Ye.I. Grigor'yev, candidate of agricultural sciences and deputy director of VNIPTIKhIM; V.A. Lisenkov, senior scientific worker at the Kazan Branch of VNIPTIKhIM; V.I. Sotnik, candidate of economic sciences and head of a laboratory at VNIPTIKhIM; A.V. Sotnik, candidate of economic sciences and senior scientific worker at VNIPTIKhIM: "Territorial Distribution of Centers for the Use of Chemical Processes at Rayon Agroindustrial Complexes"/

/Text/ One of the priority tasks of the Rossel'khozkhimiya All-Russian Production-Scientific Association is that of completing the work of creating primary units for providing chemical services for agriculture -- chemical centers for providing high quality agrochemical services for kolkhozes, sovkhoses and inter-farm enterprises. In conformity with the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Creating a Single State Agrochemical Service for the Country," the formation of a chemical service down to the rayon level inclusive has just been completed: 75 republic (ASSR), kray and oblast and 1,685 rayon associations of Sel'khozkhimiya have been created. The "All-Round Program for Raising the Fertility of Soils at Kolkhozes and Sovkhoses in the RSFSR During 1981-1985," developed by VNIPTIKhIM /Vserossiyskiy nauchno-issledovatel'skiy i proyektno-tekhnologicheskii institut khimizatsii sel'skogo khozyaystva; All-Russian Scientific-Research Institute and Planning-Technological Institute for the Use of Chemical Processes in Agriculture/ and approved by the RSFSR MSKh /Ministry of Agriculture/, calls for the construction during the 11th Five-Year Plan of 3,567 farm and inter-farm agrochemical centers. Prior to the beginning of 1983, 661 centers had been organized for providing services for 25,000 kolkhozes and sovkhoses in the RSFSR. The fact that more than 6,000 RSFSR kolkhozes and sovkhoses presently have mineral fertilizer storehouses for storing 8.5 million tons is facilitating to a considerable degree the work of creating primary units for the chemical service.

A condition for the efficient functioning of the primary production units of the agrochemical service, as borne out by experience, is that of their development in a consistent manner and by stages. Considerable importance is attached to ensuring that the subunits organized at each stage conform both to the level of use of chemical processes in agricultural production, taking into account the conditions found at the specific farms and the actual volumes of

their use of organic and mineral fertilizers, ameliorants and other resources and the availability of the necessary equipment and manpower, and to the regional peculiarities of the farms being serviced.

During the first stage in the creation of lower formations for the use of chemicals in agriculture at kolkhozes and sovkhozes, all-round units are organized for providing agrochemical services within the structure of field crop brigades (sections). The equipment and other principal means of production are not assigned to the teams and all of the work concerned with the use of chemical processes is carried out under the direction of the farm's agrochemical service based upon the cost accounting task of the brigade (detachment). At the present time, this form of agrochemical services is typical for kolkhozes and sovkhozes in the nonchernozem zone of the RSFSR having limited areas of arable land and also for farms located in Siberia and the Far East on which the dosages of chemical agents being employed on large areas are still negligible.

4 With growth in the volumes and improvements in the assortment of organic and mineral fertilizers being used, qualitative changes will take place and a requirement will develop for specialization in carrying out work with individual types of chemical agents. Under these conditions the all-round units for providing agrochemical services in a majority of instances will no longer conform to the increasing requirements and an objective need will appear for creating fertility detachments -- the second stage. A fertility detachment is a production subunit for providing agrochemical services for agricultural enterprises included in their structure. The detachments are assigned the principal means of production and staffs of permanent and temporary workers which have been combined into specialized units for carrying out a complex of operations associated with the use of chemical processes in agriculture based upon an approved cost accounting task. As a rule, a fertility detachment services one kolkhoz or sovkhoz and is a structural subunit of a farm. The creation of two or more fertility detachments is possible at enterprises in southern and eastern Siberia having large areas of agricultural land.

It is our opinion that the final stage in creating a single chemical service for agriculture in the Russian Federation is that of organizing chemical centers having standard facilities for storing a complex of the required types of mineral fertilizers, ameliorants and plant protective agents, transport equipment and special equipment for the loading, unloading, transporting, mixing and applying of chemical agents and when needed -- a landing and take-off strip and also a staff of permanent and temporary workers.

Depending upon the sources for the financing of capital investments, the chemical centers can be farm, that is, belonging to individual kolkhozes or sovkhozes, state (built using the resources of Sel'khozkhimiya), inter-farm -- erected on the basis of proportional participation by several farms or state-cooperative -- organized on the basis of cooperation between Sel'khozkhimiya and the farms being serviced. It bears mentioning that the character of the work carried out and the final goal -- achieving an increasing degree of soil fertility -- are the same for all of these formations. Moreover, regardless of the sources for financing, they must from the very beginning be

under the methodological and organizational control of the rayon service for the use of chemical processes in agriculture.

In the interest of increasing the mobility and efficiency of the chemical centers when carrying out important agrochemical operations, specialized formations are organized for them -- permanent and temporary units for the use of dry mineral fertilizers (including mineral fertilizer mixing), for the liming, phosphiting and gypsuming of soils, for preparing and transporting composts, protecting plants, applying liquid ammonia and ammonia liquor, preparing and applying liquid all-round fertilizers, servicing agricultural aviation and for employing chemical processes in behalf of feed production and animal husbandry. Distinct from fertility detachments, the territorial distribution of chemical centers is determined not by the economic feasibility of individual kolkhozes and sovkhoses but rather by the maximum national economic effectiveness.

At the present time, there are methods for optimizing the use of chemical agents which are adequately sound and being employed extensively in economic practice: mineral fertilizers (dry and liquid), toxic chemicals, pesticides and so forth. There is one task that is considerably less developed -- the placement of warehouse technological complexes for the storage of chemical agents within a rayon agroindustrial complex (RAPO), that is, the preparation of a plan for distributing the chemical centers as a complex of warehouses for liquid and dry non-powdery and powdery mineral fertilizers, lime materials and toxic chemicals which can be located on the territory of the same farm, taking into account the social production conditions and the level of development of the infrastructure.

Work is being carried out in connection with the distribution of a network of warehouses for chemical resources for a group of rayons in a kray, oblast or autonomous republic. Thus the method of nomograms, employed by NIPTIMESKhNZ /Nauchno-issledovatel'skiy i proyektno-tekhnologicheskii institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva Nечernozemnoy zony RSFSR; Scientific-Research and Planning-Technological Institute for the Mechanization and Electrification of Agriculture in the Nonchernozem Zone of the RSFSR/ assumes a search for the proper distribution for warehouses for both dry mineral fertilizers and for ameliorants and toxic chemicals. However, it is not suitable merely for approximately computations, since it does not call for an economic justification for the search results (Methodological Instructions for Computing the Optimum Distribution and Production Capability of All-Round Centers for Providing Agrochemical Services for Agricultural Enterprises Using Ground Machines and Aviation. Moscow, 1974). As a result of the decision, a single variant has been obtained and this precludes the possibility of determining its comparative effectiveness. In addition, when solving a task using this method, it is possible to obtain a variant in which some points require the construction of warehouses for mineral fertilizers, others -- for lime and still a third group -- for toxic chemicals and this is in conflict with the approach employed for chemical centers as facilities having a complex of warehouses located at the same point.

Among other shortcomings of this method, mention should be made of the fact that it precludes the possibility of optimizing the zone of direct services for farms of the central regional base; of calculating the turnover coefficient

for warehouses (for remote warehouses it is accepted as being equal to 2 and for rail-served bases -- 5); of examining the possibility of supplying the farms and chemical centers with products directly from supplier plants and bases of neighboring regions (meanwhile it is precisely this type of shipment that is receiving special attention in studies being carried out at the Institute of Complex Transport Problems of USSR Gosplan); of differentiating the dosages for applying fertilizers, both for individual farms in a region and for application periods (they are being accepted as average and equal to the ratio of the annual quantity of fertilizer applied to the overall area of agricultural land in the microzone, republic or kray). In accordance with the method developed, nomograms are not excluded for the variants, nor is the solution by means of which a farm can provide services from several warehouses located at different regional points excluded. Similar comments can be made regarding the methods employed by VNIPIagrokhim, TsEMI /Central Economic-Mathematical Institute (USSR Academy of Sciences)/ and GIPROTIS /State Institute for Standard Experimental Planning and Technical Research/ (Methodological Recommendations for Planning Optimum Goods Traffic in Mineral Fertilizers and the Distribution of Warehouses for Their Storage. Moscow, 1969; Methods for Optimum Long-Range Planning for the Distribution and Construction of Mineral Fertilizer Warehouses. Moscow, 1969).

We consider the best method to be the one employed by VNIPIagrokhim. However, even this method is fraught with certain shortcomings: it assumes that only one warehouse can be built at a given center for each type of chemical agent; the dosages for applying fertilizers are not differentiated by periods; the prospects for development of a road network in a region are not taken into account; no consideration is given to warehouses for intra-farm use for local applications of fertilizer; the scale for the work is computed for an oblast, kray, autonomous republic or higher and not for the individual farms of a RAPO /rayon agroindustrial association/ and so forth. (Method for Developing a Uniform Plan for the Distribution of Optimum Capacity Warehouses for the Storage of Mineral Fertilizers and Other Chemical Products at Organizations of Sel'khoztekhnika, Inter-farm Associations, Kolkhozes and Sovkhozes, Ryazan, 1978).

In the interest of eliminating the mentioned shortcomings, VNIPTIKhIM and its Kazan branch developed an economic-mathematic model and an algorithm for computing the task, the forms for input and output data and a system of classifiers. The task was established: taking into account the social and ecological production factors, to define a plan for the distribution of warehouse complexes within a RAPO which will result in minimal expenditures for the construction and operation of warehouses and also for transporting and applying chemical agents to the soil.

The algorithm solution is based upon a logical computation of the variants for assigning farms to suppliers and can be presented in the following form:

1. Determine the farms to be served by a chemical agent production plant.
2. Define the zone for farm services by a regional base.
3. Compute the variants for assigning farms to chemical centers.
4. Define the one-time capacity of the warehouses.
5. Determine the expenditures for the construction and operation of warehouses. Compute the transport expenditures.
6. Select the minimal total expenditures, from the variants obtained, for the distribution of the chemical centers.
7. Minimization of the total

expenditures by means of a search for a rational zone for the provision of services to farms by a regional base or chemical centers. 8. Define the functional of the task. 9. Compute the requirements for transport equipment. 10. Disposition of take-off and landing strips. 11. Define the priority order for the construction of warehouses.

The essence of the method under discussion is as follows. Certain facts are known regarding the regional agroindustrial complex: the chemical agent production plants within the radius of efficient motor transport operations; the consumer-farms for the chemical agents; their future chemical agent delivery volumes; the dimensions of the sowing areas at the farms being served; the volume dynamics for the receipt and applications of chemical agents; a list of the principal technical-economic characteristics of existing rail-served and river-served bases in the regions studied and in adjacent regions; the availability of transport equipment and the dynamics of their availability by periods of the year; characteristics of the transport routes between all of the installations served; availability of labor resources in areas of possible locations of chemical centers; ecological limitations at the possible locations for chemical centers.

During the course of solving this problem and based upon this data, a determination is made as to which farms are most suited from an economic standpoint for the construction of a complex of inter-farm or farm warehouses, their number and the standard plans for each one, the capital investment volumes required for new construction or for modernizing the centers, the requirements for transport equipment and their workload during operations concerned with the transporting and application of chemical agents, based upon the condition that each kolkhoz and sovkhos in the region is supplied with the required fertilizers and in accordance with the optimum schedules. The optimum criterion for the disposition plan for chemical centers is standard for a given type of task -- minimal expenditures for the construction and operation of warehouses and also for transporting and applying the chemical agents to the soil.

The basic principle for solving the task consists of utilizing the method of establishing a plan, that is, an optimum variant for locating warehouses for the storage of dry non-powdery mineral fertilizers affects the ability to obtain an optimum variant for locating the warehouses for other types of fertilizers. Planning for the distribution of warehouse complexes is based upon one condition -- the distance from the warehouse to the field must not exceed the radius of efficient transport operations or fertilizer applications using the most productive transport means and on a direct basis.

At the present time, the work has been completed and initial approval has been received for the methodological instructions for five RAPO's in the Tatar ASSR and Kirov Oblast. A production check on methodological recommendations continues to be carried out in regions of all-round use of chemical processes in the RSFSR.

The proposed methodological recommendations possess the following advantages. First of all, they are aimed at developing the primary level of chemical services for a RAPO (all existing and similar methods have been developed mainly for micro-zones, oblasts, krays and ASSR's). Secondly, the

**Economic Effectiveness of Different Variants For Locating Chemical Centers  
in Rybno-Slobodskiy Rayon in the Tatar ASSR**

	Plans, Developed...		
	Using the VNIPTIKhIM Method	Using the Nomogram Method	For a Rayon Agrochemical Association
Capital investments, thous. of rubles	2377.83	2338.81	2576.60
Corrected capital investments, thous. of rubles	237.80	233.88	257.66
Annual operating expenses, thous. of rubles	167.56	172.50	179.87
Transport expenses, thous. of rubles	318.85	349.44	343.49
Specific transport expenses, rubles per ton	6.9 <sup>1</sup>	7.57	7.44
Total corrected expenditures, thous. of rubles	724.21	755.82	781.02
Specific corrected expenditures, rubles per ton	15.70	16.38	16.93

methodological recommendations take into account, to a maximum degree, the peculiarities of the agrochemical work at each kolkhoz or sovkhoz in the region under study and they make it possible to obtain new variants for the optimum solutions when changes take place in individual factors (conditions). Thirdly, the economic requirements of efficient farm management are taken into account more fully when developing the methodological recommendations -- for each variant for the placement of chemical centers, an exhaustive justification is provided which proves that all other variants will cause social-economic harm to the organizations being served.

The economic effectiveness of the plan obtained using the method as developed was compared against the plan proposed by the republic's agrochemical association and the plan computed using the nomogram method (the latter two plans were used as the basic variants, see Table).

The indicators in the Table underscore the substantial advantages to be realized from planning the locations for chemical centers using the economic-mathematical model developed by VNIPTIKhIM.

Fourthly, there is a factor which we consider to be of great importance -- the proposed method is the only one at the present time which views the chemical centers as installations and not as isolated warehouses for the storage of individual types of chemical agents. In addition, by selecting possible locations for the chemical centers at future population centers or close to them, taking into account the requirements for protecting the environment, limitations with regard to the social and ecological production factors are introduced into the task. Thus, mention should be made of the fact that all of the other variants, especially the simple ones, can cause considerable economic harm to the farms being served. Here we have in mind the fact that if the consequences of unjustified use of chemical agents can be corrected over a period of 1-2 years, then the irrational distribution of

chemical centers will exert an adverse effect, owing to increased expenditures, over a period of many years, since experience has shown that warehouse facilities which have already been built are not subject to rapid relocation.

The carrying out of computations for the method described, for regions concerned with the all-round use of chemical processes in the RSFSR, will make it possible to approve it in conformity with the conditions found in the various natural-economic zones.

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## REGIONAL DEVELOPMENT

### CONTACTS, RELATIONSHIPS OF SEL'KHOZKHIMIYA WITH SOVKHOZES, KOLKHOZES

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 9, Jul 83 pp 39-42

/Article by M.D. Yeremin, Candidate of Economic Sciences and head of a laboratory at NIIEOSKh NZ for the RSFSR: "Associations of Sel'khozkhimiya: Contacts and Relationships With Sovkhozes and Kolkhozes"/

/Text/ Studies have shown that production relationships develop most often in definite combinations and mixtures in the practical work carried out by specialized enterprises and cooperative and integrated formations (branches of the APK /agroindustrial complex/). This derives from the complications involved in organizing an efficient system of economic interrelationships.

Without going into too many details on reporting the results of studies in the classification of production-economic relationships and the trends in the development of a system of economic interrelationships in the APK on the whole, let us examine them using as an example the development of production formations for providing centralized agrochemical services for agricultural production, since these reflect to a considerable degree the overall features and peculiarities associated with the development of this multiple-plan and complicated economic process at the oblast and rayon levels of the complex.

Production subunits for providing centralized agrochemical services for agricultural production are included in the group of new formation of the mixed type. They simultaneously participate directly in the production of agricultural products, in supplying the agricultural enterprises and in producing (procuring) certain materials for them. The Lensel'khozkhimiya Production Association has been created and is functioning in Leningrad Oblast. It includes 16 RPO's /rayonnoye proizvodstvennoye ob'yedineniye; rayon production association/, which constitute the main production unit of the branch system. An RPO is the only production-economic complex for providing agrochemical services for agriculture in a rayon. Its principal task -- organizing the efficient use of fertilizers, chemical and biological plant protection agents, soil ameliorants, feed additives, growth stimulants and other chemical agents for agricultural production and supplying them to the agricultural enterprises.

In 1980 the Lensel'khozkhimiya Association had roughly 31 million rubles worth of fixed capital at its disposal. On the average, the value of the fixed capital of each RPO amounts to approximately 2 million rubles. In the fixed

capital structure, the principal portion is made up of funds for mechanized detachments and brigades (47-60 percent) and funds of a supply nature (35-36 percent), in the structure of which 30-31 percent is used for buildings and installations. The overall volume of production, work and services carried out by subunits of Lensei'khozkhimiya, determined arbitrarily from a cost standpoint (including commodity turnover), amounted to approximately 49 million rubles worth in 1980.

The mobile portion of the fixed productive capital of associations is represented by tractors of a technological and special nature and motor vehicles.

For the purpose of providing agrochemical services for agricultural enterprises, 3-4 production subunits (departments or sections) have been created and are functioning in each RPO: mechanized detachments, supply (trade), motor vehicle base. In some associations there are subunits for carrying out repair (auxiliary) work.

Work carried out by mechanized detachments, brigades and teams and motor transport operations associated with providing services for the technological process for producing agricultural products are having a direct effect with regard to improving the fertility level of the fields. Supply (trade) and transport operations for delivering goods to consumer warehouses are exerting only an indirect effect on this process.

An analysis of the structure of expenses and the distribution of workers among the production subunits reveals that their collectives are making a contribution towards the production of goods mainly by means of mechanized detachments. The production volume of the mechanized detachments, according to the proportion of expenditures in their structure, amounts to 62-66 percent and according to the proportion of workers engaged here -- 57-58 percent. For supply (trade) subunits, these indicators are 22-23 and 6.7-8.7 percent respectively of the overall production volume of the associations. In the case of mechanized detachments and motor vehicle transport, 39.6-41.5 percent of the work carried out is for the liming of soils and transporting and applying organic and mineral fertilizers to the soil and up to 18 percent -- for agricultural operations. The proportion of transport earth-moving work being carried out at agricultural and other enterprises and organizations in the zone of services is rather considerable.

As a result of inadequate production capabilities, the subunits of Lensei'khozkhimiya accepted only 12 of the oblast's sovkhoses for all-round servicing. At the remaining agricultural enterprises in the service zone of the RPO, the entire volume of agrochemical work associated with the liming of soils, providing services for agricultural aviation and the transporting of mineral fertilizers is being carried out completely. The remaining operations associated with providing agrochemical services for agricultural production are being carried out by the agricultural enterprises themselves.

In connection with improving economic interrelationships aimed at achieving a closer association between the work performed by Sel'khozkhimiya associations and the final production results of sovkhoses, great importance is attached to

improving relationships with the farms of mechanized detachments and motor transport subunits, where the principal volume of production operations and services is carried out. For it is these units that exert a direct influence with regard to raising the fertility of fields, by participating in the technological process for producing agricultural products at the sovkhoses being serviced.

The production-technological relationships between Sel'khozkhimiya and enterprises being serviced serve as the foundation for a definite system of interrelationships, which are developing at the present time in a rather complicated manner. This is explained first of all by a multiplicity of RPO production functions, by insufficient development of their technical base and by difficulties in satisfying the requirements of the enterprises being served for raw material and other material resources (fertilizers, micro-additives, effective means for combating the pests and diseases of agricultural crops and so forth). Thus the system of production relationships has a many-sided nature and is rather varied in terms of its content. Moreover, it is extremely difficult with regard to the production of final output by the enterprises served.

The production and economic relationships between the RPO of Sel'khozkhimiya on the one hand and the associations being served and their subordinate sovkhoses on the other, in terms of the role and attitude towards the technical process for producing agricultural products, are developing in three principal directions.

The first of these includes production relationships in work and services, which appear as a component part of the technological process for producing agricultural goods (transporting and application of organic and mineral fertilizers, protection of agricultural crops against pests and diseases, transport operations in the harvesting of crops and so forth). For the most part, this group of relationships applies to the field crop husbandry departments of sovkhoses served and to the mechanized detachments and motor vehicle bases of the RPO of Sel'khozkhimiya. If the work and services volumes for this group of relationships, with regard to a definite crop, are considerable or if they are carried out completely by the RPO, an opportunity is created for developing a system of economic interrelationships based upon the final results in the production of goods, by determining the quantitative values for the degree of influence exerted by the work and services of Sel'khozkhimiya associations on an increase in yield.

The second direction includes the production relationships for work and services which are expressed in servicing the technological process for the production of agricultural products (procurement of peat and lime, preparation of composts, application of peat and liming of fields, transporting of organic fertilizers from animal husbandry farms).

The work and services associated with this group of relationships possess a prolonged (extended in terms of time) period of action on the fertility of fields. The chief peculiarity lies in the fact that in the field crop husbandry department the effect of this work and services on the final production results is negated by the void between their fulfillment and the

result realized (increase in yield) and in the animal husbandry department the effect on an increase in the production of final output generally does not lend itself to expression in quantitative values.

The third direction -- includes production relationships in supply (trade), work and services in delivering materials for the use of chemical processes in agricultural production, which make it possible to employ a particular production technology. Here the effect on the production of final output derives mainly from the chemical resources proper. This group of relationships, work and services exerts an effect on the final production results through timely deliveries of high quality resources and chemical materials for agricultural production. The specific effect and amount of contribution by Sel'khozkhimiya subunits towards the production of final output in this instance also, for all practical purposes does not lend itself very well to a quantitative determination.

The difficulties associated with computing the quantitative values for growth in the final output of agricultural enterprises, under the influence of operations by Sel'khozkhimiya associations, raise the need for employing a common summary, evaluative and stimulating indicator for the sovkhozes and subunits of Sel'khozkhimiya.

The system of production relationships is accompanied by the formation of economic relationships. Both unilateral and bilateral relationships are clearly manifested in the practical activities of Sel'khozkhimiya subunits, including an attendant economic relationship that is conditioned by an increase in the fertility of the agricultural lands at the enterprises being served. It is expressed most clearly in the fact that additional and substantial expenditures arise in the Sel'khozkhimiya RPO in connection with paying for labor and stimulating labor, for the purpose of raising the production of goods at the farms being served. In the process, the RPO, in creating an additional effect for the enterprises being served, itself bears additional expenses which are not compensated. Indeed, the rates for work and services remain unchanged. The more this contradiction separates the economic interests of both collectives, the higher will be the positive effect of their activities.

The rather complicated system of production-economic relationships of the Sel'khozkhimiya RPO with the production associations being served and their subordinate sovkhozes has produced a complicated system of economic interrelationships.

The system of contractual relationships which still prevails at enterprises of Sel'khoztekhnika serves as the organizational basis for the economic interrelationships between the Sel'khozkhimiya RPO and the agricultural enterprises being served.

The contract concluded between the agricultural enterprises and the Sel'khozkhimiya RPO is the basic document for defining the entire system of economic interrelationships between the Sel'khozkhimiya RPO and the agricultural enterprises being served. In the process, the computations for work carried out in conformity with the contract are carried out based upon rates or wholesale factory prices which were approved in the established manner.

The economic interrelationships within the Sel'khozkhimiya RPO, between the collectives of production subunits and also between these collectives and the association as a whole, develop based upon a distribution of the integrated effect (profit) realized from the final activity, through the economic incentive fund and the system of incentives for high quality work from the wage fund.

One shortcoming at the present time is the low conditionality of the final production results of sovkhozes and the weak dependence upon these results.

The existing system for organizing work and services on the basis of centralized agrochemical services for agricultural production and the computations for them serve to ensure a rather high level of production efficiency. Thus the profitability level for the entire work profile of the RPO, according to data for 1979-1980, amounted to an average of from 4 to 12 percent.

The profitability for the mechanized detachments and motor vehicle bases was somewhat higher. However, its higher level is achieved not as a result of the basic production activity associated with providing agrochemical services for agricultural enterprises, but rather it derives to a considerable degree from the carrying out of other types (earth-moving work carried out mainly on the side) of agricultural work. The principal types of work carried out by the RPO, such as the liming of soils, do not even compensate for the carrying out of such work. Nor is reimbursement received for the supply (trade) expenses of the RPO.

The plan for obtaining profit is not being fulfilled by the production associations. On the whole, it was fulfilled by the Lensel'khozkhimiya Association during 1979 and 1980 by 89.3 and 88.3 percent respectively.

The principal portion of the profit earned by the Sel'khozkhimiya RPO is added to the economic incentive fund. However, the contributions to all of the economic incentive funds are lower than those planned as a result of considerable underfulfillment of the profit plan. Under the existing situation, the insufficient amounts in the material incentive fund also fall short of ensuring the required degree of coordination of economic interests between workers attached to the agrochemical service and workers at the agricultural enterprises being served, with regard to the final output of their production operations.

Moreover, the system for issuing bonuses employed by the RPO is oriented only weakly towards the final operational results of the agricultural enterprises served or towards increasing final output. The bonus amounts for the production of agricultural products are so negligible (25-30 rubles per worker annually) that a substantial stimulating effect is never realized. But even these small amounts in the form of incentives for the production of agricultural goods are quite often never paid out owing to the fact that the farm production plans are not always fulfilled. It also bears mentioning that the existing system for awarding bonuses for the production of agricultural goods by sovkhozes is oriented least of all towards those who carry out the work and services directly -- workers attached to the Sel'khozkhimiya RPO.

Analysis has shown that the overall wage level for workers attached to Sel'khozkhimiya subunits, taking into account increases and bonuses, is roughly the same as that for similar categories of workers at the sovkhoses being served. However, if we take into account the fact that a considerable portion of the workers in the agrochemical service, as a result of performing work and services involving the use of toxic chemicals and other harmful substances, for which they receive appropriate increases for the degree of harm involved, then it would seem that their somewhat lower wage level and work incentives cannot be considered normal. Moreover, one should bear in mind the mobile nature of the work being performed by the principal bulk of workers in the agrochemical service and the extent to which they work at some distances from their permanent places of residence.

A study of the production-economic relationships, carried out on the basis of an analysis of the logistical base and the structure, volume and nature of production and a study of the resultant system of economic interrelationships for new formations for providing agrochemical services for agricultural production with enterprises being served, are making it possible to expose the shortcomings and to define and formulate with an adequate degree of scientific validity the principal trends and paths to be followed for improving the system of economic interrelationships. The chief one of these at the present time, under the conditions imposed by centralized agrochemical services for agricultural production, is that of reorganizing the system of distribution relationships based upon the required coordination of this system with the final output of the enterprises served. First of all, this requires improvements in the system of material incentives and particularly the establishment of scientifically sound indicators for wages and the issuing of bonuses to workers in the agrochemical service. Improvements are required in the system of contractual relationships based upon the establishment of a more efficient system for evaluating the quality and acceptance of work, the annual operational results and scientifically sound indicators for evaluating the final output of the enterprises being served. In the process, positive results in merging the economic interests of the Sel'khozkhimiya RPO and the sovkhoses being served, based upon the final agricultural output, can be ensured by introducing the following basic recommendations into production operations.

In the interest of achieving an adequate and stable source of funds for the formation of the material incentive fund, the associations of Sel'khozkhimiya should ideally be released from having to pay for fixed productive capital, as enterprises having a low level of production profitability, with the system of adding surplus profit to the budget being retained in the process.

An efficient system should be developed with regard to the principal quality requirements for work and services performed by subunits and individual workers attached to Sel'khozkhimiya associations, with bonuses being issued to those workers who observe these requirements.

At the same time, the overall wage level at enterprises and production subunits of Sel'khozkhimiya associations should be raised an average of roughly 5 percent compared to corresponding categories of workers at sovkhoses who are not required to work with toxic chemicals or pesticides.

Ideally the statute concerning additional payments for output, which is in effect at sovkhoses, should be extended to include workers attached to the centralized agrochemical service. This calls for an additional payment to be made into the wage fund for output and for this amount to be paid out at the end of the year to those Sel'khozkhimiya association workers engaged in carrying out technological work associated with the production of agricultural goods and work (services) concerned with servicing the technological process for this production. In order to avoid dual payments for the production of the same output (sovkhoses and associations of Sel'khozkhimiya), it is best to create this fund as an additional one at sovkhoses or at least to divide up the existing fund proportional to the production contribution by both subunits of the branch production.

Concrete definition of the recommendations and the system for implementing them will be carried out during the process of defining more precisely and improving the statutes on wages and material incentives for workers attached to subunits of Sel'khozkhimiya.

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## AGRO-ECONOMICS AND ORGANIZATION

### BELORUSSIAN RAPO EXPERIENCE INDICATES OPERATIONAL PROBLEMS

Minsk SEL'SKOYE KHOZYAYSTVO BELORUSSII in Russian No 10, Oct 83 pp 26-27

[Article by M. V. Kolyago, chairman of the soviet of the Dokshitskiy Rayon Agro-Industrial Association: "Being Responsible for the Final Results"]

[Text] Practical experience convinces us that a further increase in the effectiveness of agricultural production is possible only with a comprehensive solution to all questions and tasks arising within the rayon's APK [Agro-industrial complex]. A single administrative mechanism enables us to concentrate material-financial and labor resources on the decisive areas of agricultural production and demands coordinated actions among all RAPO [Rayon agro-industrial association] partners.

The main difficulty at the first stage of work of the rayon agro-industrial association involves eliminating the psychological barriers of departmental isolation. This is why from the first days of operation in our rayon of the new administrative organ for agricultural production--the RAPO soviet--we have been emphasizing increased responsibility of all directors of enterprises and organizations belonging to the association for the end results of work. We are striving to develop initiative, a business-like manner and enterprise in them with the understanding that these qualities will serve the interests of developing the entire mechanism of the rayon's APK.

In day to day work we try to avoid petty surveillance of kolkhozes and sovkhoses and enterprises and organizations belonging to the RAPO. We try to give management cadres full independence in solving problems which they are competent to deal with while strictly observing technological discipline and schedules for fulfilling agricultural operations. Our motto is: Fewer of various types of recommendations and instruction and more specific organizational work locally. In this plan the RAPO soviet feels the constant support of the rayon party committee.

The work of the rayon agro-industrial association is based on an annual plan for the coming year which is confirmed by a meeting of the soviet. The agenda of the regular soviet meetings includes questions that arise from specific circumstances involving the development of agricultural production in the rayon at a given moment and that require immediate solutions.

The agenda for the coming meeting of the soviet is usually determined 15-20 days ahead of time. It is printed and sent out to the members of the soviet so that they can become familiar with it and introduce supplements and changes, prepare for a discussion of urgent problems and make their proposals for drafts of decisions that are being prepared. The fundamental principle in preparing questions for examination at meetings involves a careful analysis and evaluation of the existing situation. In order to thoroughly study a particular problem no more than 4-5 problems are brought up per meeting. In order to secure dependable controls over the fulfillment of decisions that are made, specific executors and execution schedules are predetermined and if necessary information on the fulfillment of decisions is heard.

The rayon agro-industrial association is concentrating its attention on the more important directions of economic development in agriculture. For us the main goal is to secure the proportional and balanced development of all enterprises and organizations belonging to the association with the aim of maximally increasing agricultural production output, of fulfilling state plans by all enterprises of the agro-industrial complex and of further improving the effectiveness of production and the quality of work.

Of priority in our practical work is concern about improving the economies of enterprises, especially those with low profits or losses. In February of this year at a meeting of the association's soviet there was a discussion on eliminating enterprises that are operating at a loss and on increasing the profit levels of economically-weak enterprises. It was noted that in accordance with the decisions of the May 1982 Plenum of the CPSU Central Committee long-term and short-term loans from Gosbank were deferred and written off for 10 enterprises in the rayon for a total of 1,173,000 rubles and eight enterprises were allocated 700,000 rubles from the state budget to finance expenditures for the building of residential and cultural facilities and to reimburse outlays for the upkeep of children's preschool facilities and for insurance payments. As of 1 January of this year there was an increase in procurement prices for products sold to the state, which will yield an additional 1,720,000 rubles if sales plans are fulfilled. In addition, 14 enterprises operating at a loss or with low profits have been paid supplements to procurement prices totalling 4,538,000 rubles. As previously, the rayon has been allocated over 2 million rubles to reimburse outlays for the use of peat for fertilizer and for liming acidic soils. All of this financial help should secure a total profit level of no less than 10 percent this year.

In accordance with the decision that was passed, the rayon association of Sel'khozkhimiya [Agricultural chemical association] is doing priority work in enterprises that operate at a loss to lime acidic soils, to deliver and apply organic and mineral fertilizers, to treat crops with chemicals and to complete cultivation operations. The rayon association of Sel'khoztekhnika [Agricultural equipment association] is trying to meet the needs of these enterprises for spare parts in a timely manner, to fill orders for the repair and technical servicing of the machine-tractor fleet and for equipping livestock raising farms. The building organizations in the rayon are rendering aid in the building of residential facilities and the PMK-48 has accelerated the operational start of reclamation objects in enterprises that

operate at a loss or with low profits. According to a decision by the RAPO soviet these kolkhozes and sovkhoses will be allocated supplementary material-technical resources and mineral fertilizers.

Since the basic portion of financial aid by the state can be obtained only via the sale of products, which is completely lawful and justified, the RAPO soviet has established constant controls over the course of fulfillment of plans for the sale to the state of animal and agricultural products on the part of kolkhozes and sovkhoses in the rayon. This year the plan for grain procurement has been overfulfilled. Kolkhozes and sovkhoses have sold the state 18,307 tons of grain, including 1,408 tons of brewing barley and 432 tons of quality seed for grain crops, for which a supplementary 120,000 rubles were received. The plans for the sale of milk and meat to the state are being fulfilled successfully. During 8 months of this year as compared to the same period last year 975 tons more milk and 150 tons more meat have been sold. Moreover, five kolkhozes and sovkhoses from among those operating at a loss or with low profits fulfilled plans for 9 months with regard to the sale of milk to the state ahead of time and five enterprises--with regard to the sale of meat.

During the first 6 months alone the monetary income of enterprises resulting from increased procurement prices grew by 542,000 rubles as compared with the same period last year, including for the sale of milk--by 460,000 rubles and for the sale of meat--by 82,000 rubles. The rayon's kolkhozes and sovkhoses received supplements worth 1,950,000 rubles.

As a result of increased prices for products sold, of the introduction of supplements for procurement prices and of increased quality of animal products enterprises received 3,122,000 rubles in profits.

The RAPO soviet has given kolkhozes and sovkhoses the tasks of this year selling the state up to 96 percent first quality milk, up to 80 percent of cattle with the best fattening qualities, of increasing the average delivery weight of calves to 400 kilograms, of selling 2,400 tons more potatoes, of delivering all flax products with the highest quality by 1 October while maximally utilizing the state's help and of increasing the profitability of agricultural production in the rayon to 26.6 percent as compared with the 7.2 percent of last year.

The question of introducing collective contracts in the rayon's kolkhozes and sovkhoses was also examined at the meeting of the RAPO soviet. Since the new form of labor organization meets contemporary production requirements, and encourages the solution of economic and social problems, the development of democratic beginnings in production management, the strengthening of labor discipline and increased labor productivity it was decided to transfer one production subdivision in each enterprise to a collective contract basis. In the rayon there are already enough examples of the highly effective work of links using collective contracts.

On the initiative of the RAPO soviet in late August a group of directors of enterprises, specialists and link leaders travelled to Kiev Oblast to study

the experience of cultivating feed root crops and of producing large and stable harvests on the level of 1,200-1,500 quintals per hectare. According to the experience of Kiev workers in seven base enterprises in the rayon the area in root crops was expanded (up to 50-100 hectares) and next year links working on the basis of collective contracts will become involved in their cultivation. In general the experience of utilizing collective contracts that has been accumulated in the rayon will be studied carefully in the RAPO soviet in order to disseminate it widely in kolkhozes and sovkhoses.

The RAPO soviet has a constant control over solutions to problems such as the elaboration and introduction into agricultural production of scientifically-based systems of farming and livestock raising, the recruitment into the production process of all internal reserves and the securing of a high level of economic effectiveness in production and increasing the role and responsibility of specialists for the end results of work. All of this will facilitate the organized completion of spring sowing, feed procurement, harvesting and improved order on livestock-raising farms. This year in the rayon average production equalled 24 quintals of grains and 150 quintals of potatoes per hectare, which was correspondingly 3 and 45 quintals more than last year. Flax pulling was completed by 1 September, enabling us to sell all flax products in August-September and to receive supplements to procurement prices for the best sales schedule. Our goal this year is to fully repay existing debts to the state regarding the sale of products from livestock raising.

All rayon kolkhozes and sovkhoses have overfulfilled their quotas with regard to the procurement of coarse feeds for the stall upkeep period. The plans for the sale to the state of milk and meat will be overfulfilled significantly, which will enable us to reduce debts tolerated during the last 2 years of the five-year plan by 250 tons for meat and by almost 1,500 tons for milk.

The production mechanism of the agro-industrial association can function with precision only with well-organized work on the part of Sel'khoztekhnika, Sel'khozkhimiya and other partners of the farmer. The RAPO soviet is doing active work to improve economic and interbranch ties which will secure an organizational and economic unity within the agro-industrial complex; it orients the activities of enterprises and organizations belonging to the association toward achieving high end results in agricultural production.

At one of its meetings the association's soviet examined and confirmed a resolution on awarding bonuses to leading cadres of the rayon associations of Sel'khoztekhnika and Sel'khozkhimiya and of the rayon agricultural energy association. Centralized funds for material incentives, cultural measures, residential construction and production development have been created. In the near future the soviet will be asked to examine estimates of expenditures and a resolution on material incentives for the victors of all types of socialist competition organized in agriculture in the rayon. With the goal of increasing the creative activeness of specialists in the association a resolution is being worked out concerning competition among them; it will also be examined by the RAPO soviet. All of this will undoubtedly facilitate a solution to established goals to a significant degree.

The RAPO soviet gives constant attention to improving the quality of products produced in kolkhozes and sovkhozes. This is an important source for strengthening the economies of the rayon's enterprises. During the first half of this year alone enterprises received 630,000 rubles of additional aid for the quality of the milk and meat that was sold to the state. At the same time we feel that the system for raising production quality can be effective only with the availability of possibilities for evaluating it. Organoleptic and visual evaluations cannot provide a complete guarantee of objectivity. In the rayon there is an inter-enterprise laboratory for determining milk quality (it also determines the quality of feed) and we have no arguments with milk plants. Other forms of production are evaluated for quality by procurement organizations and it is completely understandable that they do not hurt themselves. In our opinion the future here lies in non-departmental laboratories of Gosstandart for determining the quality of agricultural products. Shared participation in financing its outlays is possible.

A most important problem for us is the preparation and securement of cadres of mass professions and of agricultural specialists. There are many difficulties involved in solving this problem. In recent years the rayon has been fulfilling its plan for recruiting from the SPTU [Agricultural professional-technical institute] by only 85-90 percent. One of the reasons young people leave the village is that the necessary conditions for work and leisure have not been created everywhere; the shortage of comfortable housing also has a great effect on this. For this reason the RAPO soviet has begun to give significantly more attention to rebuilding the village. Our goal for the current five year plan is to have a trade center, a kindergarten-nursery, a complex reception point for consumer services, a cleaners-laundry, a house for the livestock farmer and a machine lot with all the modern conveniences for easing the labor of machine operators and livestock farmers in every kolkhoz and sovkhoz. This is being implemented.

The rayon fulfills its plan for the building of housing each year, but we must admit that the pace of construction is extremely unsatisfactory. The capacities of the inter-kolkhoz MPMK-24 building organization are still weak, and the other building organization in the rayon, PMK-83 of the BSSR Ministry of Agricultural Building, works basically elsewhere and not in agriculture. MPMK-24 can build one settlement with 15-20 houses per year. At such a pace some enterprises will have to wait 15-20 years for their turn, and housing is needed today. In our opinion, the time has come for city building organizations to actively become involved in the building of housing and social-cultural structures in the village. Apropos of this, considering the special importance of a quick solution to this problem it is not completely clear why the managements of capital building of rayon executive committees, which are the clients of kolkhozes and sovkhozes, were not included in rayon agro-industrial associations.

There are many problems. The RAPO administrative mechanism is not yet fully developed. The creation of centralized funds and the elaboration of a free production-financial plan for the association will give it new power. Otherwise, for example, sovkhozes are requesting increased limits for

acquisitions and the soviet is powerless to help since sovkhoses are financed strictly according to specific directions and separately according to low and high profit enterprises. The impression is created that the financial organs of the BSSR Agricultural Ministry are not taking into consideration the fact that agro-industrial enterprises are functioning in the rayon.

One of the most important problems on which the RAPO soviet is working is strengthening specialization and increasing concentration in agricultural production and facilitating the transition to an industrial base. In the rayon inter-enterprise associations for beef production have been in operation for the past 5 years. This year a similar association for milk production was created in the Zarya Kommunizma Kolkhoz. Specialization in agricultural farming is being increased further.

In the time remaining this year the RAPO soviet will very carefully deal with the circumstances surrounding the fulfillment of goals for 3 years of the five-year plan as a whole in all kolkhoses and sovkhoses and enterprises and organizations in the rayon belonging to the agro-industrial association. Work is being done to elaborate the optimal structure of sowing areas in each enterprise with a consideration of existing production specialization and existing shortages in the production and sale of products to the state during the previous period. The goal that has been established is to most closely link the work of all RAPO partners to the activities of kolkhoses and sovkhoses in the rayon in order to fulfill the Foodstuffs Program.

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MEASURES TO INCREASE PRIVATE PLOT PRODUCTION ADVANCED

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 11, Nov 83 pp 43-49

[Article by V. I. Sidorenko, main administration deputy chief, USSR Ministry of Agriculture: "Citizens' Private Subsidiary Plots"]

[Text] The main role in implementing the USSR Food Program belongs to the public production of kolkhozes, sovkhoses and other state and cooperative enterprises. At the same time, the CPSU places great importance upon citizens' private plots in order to improve the population's supply of food products. Such plots are a quite large agrarian producer for the nation, accounting for more than 25 percent of gross agricultural output. The nation has 35.1 million private plots. The average size of a kolkhoz family farmstead area is .31 hectares, that of a worker or employee living in a rural locality -- .16 hectares, and plots of urban or urban type settlement dwellers have an average size of .08 hectares.

Collective horticulture and gardening has been further developed in recent years. Thus, in 1982 5.2 million worker and employee families had collective orchards [sady] and 5.5 million had collective gardens. During 1981-1982 an additional 3,438 orchard associations, made up of more than 700,000 families, were organized in the nation.

At the beginning of 1983 the population's farms kept one out of five head of cattle, swine, sheep or goats; one out of three cows (as a percent of the total herd for all categories of farms in the nation). The national averages per 100 citizens' private plots were: 72 head of livestock, including 40 cows, 95 sheep and goats, and 1,168 head of poultry.

In 1982 citizens' private plots accounted for 26 percent of the value of agricultural products obtained from all categories of farms. This figure includes 32 percent of all animal products and 20 percent of all plant products. However, problems in the development of private plots do not primarily involve the material and foodstuffs base. Such plots also perform social functions.

Agricultural production at private plots is mainly for consumer use, therefore its successful development will assist in the more complete satisfaction of the public's demand for food products, in the expansion of assortments and in

improving the incomes of workers engaged in such operations. The effective use of the organizational and production potentials of private plots will assist in finding a comprehensive solution to problems in increasing the production of those types of agricultural products, shortages of which cause breakdowns in supplies to the population.

In propagandizing the idea of private plots, it should be kept in mind that the discussion is not about shifting agricultural production to the individual sector, but of the use of available labor and material resources their enlistment into the agricultural production sphere and improvements in the social and psychological climate in the countryside.

Placing great significance upon all these problems, in January 1981 the CPSU Central Committee and the USSR Council of Ministers passed the decree: "On Additional Measures to Increase the Production of Agricultural Products on Private Subsidiary Plots of Citizens ". It defined measures, the implementation of which will put into use reserves for increasing the production of agricultural products.

The decree innovatively poses problems on the integration of kolkhoz and sovkhos public production with private plots, and in their joint activity on the basis of strictly voluntary contracts between kolkhozes, sovkhoses and citizens for the purchase and raising of livestock and milk production at private plots. It also outlined additional measures for the further development of collective orchards and gardens and expanded the list of land which could be used for such purposes.

The appropriate ministries and departments, kolkhozes, sovkhoses and local soviets are entrusted with developing and implementing effective measures for supplying citizens' private plots with feeds, young livestock and poultry, orchard and gardening planting stock, packaging, small-scale equipment and fertilizers. USSR Goskomsel'khoztekhnika organizations are obligated to provide repair and technical services to tillage and orchard equipment belonging to citizens.

The decree also directs attention to the necessity of expanding the procurement activities of consumer cooperatives and the development of commission trade in agricultural products at kolkhoz markets. It defines other measures directed towards increasing agricultural production in the individual sector. The range of additional measures is quite broad and diverse.

After the decree's appearance, problems involving the operation of citizens' private plots are reflected in contracts and agreements signed between farm administrations and trade union organizations, Farm trade union committees have created commissions which are conducting extensive organizational work to help the public in private operations and which are involved in problems of collective orchard and gardening work

In 1982 the nation's kolkhozes and sovkhoses sold the population 17.3 million suckling pigs and 614 million head of young poultry of all breeds. These figures are, respectively, 5 and 2 percent greater than for the preceding year. The figures per 100 private plots are 52 suckling pigs and 1,970 young poultry.

The population was allocated 23.4 million rubles of USSR Gosbank credits for the acquisition of cows and calves . This is 16 percent more than in 1981. Workers and employees were given 226 million rubles of long term loans (in 1980 32 million rubles were allocated) to build and purchase garden buildings and to improve collective garden and orchard areas.

In 1981 enterprises, organizations and citizens received, for temporary use to raise potatoes and vegetables, 74,000 hectares of idle land, including 31,000 within the boundaries of cities and other populated points. As a rule, these are small parcels of land, on which it is difficult to use equipment. In the majority of cases they are located within the boundries of settled areas and practically cannot be effectively used for public production.

The population has started receiving more assistance in acquiring feed for privately owned livestock: in 1982 kolkhoz farmers, workers, employees and other citizens were granted 5.0 million hectares of natural hayfields and more than 10.5 million hectares of pastures on which to raise hay and feed livestock. In many cases these hayfields and pastures were granted for extended periods. This is of considerable importance, as the population can carry out land improvement work on these parcels.

The two years of this decree's functioning has shown that the work done has led to positive shifts in the development of the individual sector. At the November Plenum of the Central Committee, General Secretary Yu. V. Andropov noted that concern about the development of private plots is demonstrating its value.

There is also great importance in the fact that the application of the decree's provisions has helped stop the decline in the number of livestock and in output which the private sector has seen in recent years. It has stabilized this and in a number of cases has even improved private plot development indicators. This is apparent from data. As of 1 January 1983, compared to the same time in 1981, citizens' private plots had increased the number of cattle by 1,042,000 head (4.5 percent) , this includes 225,000 cows (0.2 percent), for swine the figures were 1,794,000 (12 percent) , sheep and goats -- 225,000 (0.5 percent) and poultry - almost 600,000 animals (0.4 percent).

Valuable experience in the successful development of private plots has been acquired in Grodno, Lvov and Odessa Oblasts, in the Lithuanian, Belorussian and Estonian SSRs and in other regions in the nation.

In some union republics, enterprises in Ministries of Consumer Services have undertaken the working of farmstead plots, collective gardens and orchards and the transportation of output. In the Latvian SSR there are 32 points taking orders to work farmstead plots. In 33 rayons in the BSSR there are points for renting equipment and supplies to assist in working plots, hauling feeds and cutting and splitting wood.

In addition, at a number of kolkhozes and sovkhoses communal services have been created. Having the rights of intrafarm units these services are building and repairing homes, farm outbuildings and rendering transportation and other services. Livestock breed improvement work is also underway. For example, in the LiSSR about 70 percent of the cows on private plots are inseminated with sperm from high quality breeding bulls.

There have been definite developments in the organization of livestock and poultry raising and purchases and in the purchase of surplus milk on the basis of contracts between farms and citizens. In 1982, 980,600 contracts were signed to raise, on private plots, the livestock and poultry belonging to kolkhozes and sovkhoses. There were also 4,896,600 contracts for purchasing the population's poultry, livestock and surplus milk. In accordance with these contracts, kolkhozes and sovkhoses purchased 917,500 animals and 2,921,500 tons of milk.

Nevertheless, a study of the situation on the spot shows that together with great daily work done by agricultural organs, kolkhozes and sovkhoses in implementing the CPSU Central Committee and USSR Council of Ministers decree, the potentials for increasing the production of meat, milk and other products on private plots are still far from completely utilized. Some kolkhozes and sovkhoses do not show the necessary concern about improving the working conditions of such plots, are poorly satisfying citizens' demands to acquire animals and have serious shortcomings in feed supply and in the organization of surplus purchases.

In a number of union republics there continues to be reductions in the number of livestock on private plots, and sizable percentages of plots do not have animals. In 1982 the percentage of plots not having a single privately owned animal was 31 percent, for cattle the figure was 45, for cows 52, swine -- 67, sheep and goats -- 75 percent. There are great reserves for the development of private operations. However, as analysis shows, the basic reasons for this situation have to do with difficulties in acquiring feed. This reason was referred to by more than half of kolkhoz farmers questioned and 41 percent of the sovkhos workers who didn't have cows; about 30 percent of those questioned pointed to this same reason with regard to swine.

Analysis also shows that increases in the number of animals in the private sector are attained mainly on those plots of citizens who were previously involved in private operations. Using help from the state, kolkhozes and sovkhoses, they are increasing production. As concerns the remaining share of the rural population, which does not have privately owned animals, they are only very slowly becoming involved in such work. Consequently, the task is to make maximum use of these large reserves and to enlist into agricultural production those strata of the population living in rural areas for the first time.

Some oblasts and rayons have considerable difficulties in supplying citizens with piglets. This is because 48 percent of the sovkhoses and 21 percent of the sovkhoses in the nation do not have user swine farms. In 1981 in the RSFSR the number of farms not having swine farms increased by 745, in the Kazakh SSR by 66 and in the AzSSR by 31 farms.

Sufficient measures have not been taken to supply citizens' private plots and garden and orchard associations with equipment for small scale mechanization, planting stock, packaging and construction materials. At present there are practically no modern small tractors, irrigation and transport equipment and other small scale equipment privately owned by citizens. Industrial enterprises are very slow in solving these problems. As a result, trading organizations cannot offer the public the needed machinery and other equipment.

Even with the acute shortage of small scale equipment for working farmstead and orchard and garden plots, there continues to be reductions in the number of horses on kolkhozes and sovkhoses. At the same time, practice shows that the population effectively uses horses for such work, for preparing fodder and for transportation. However, kolkhozes and sovkhoses experience great difficulties in acquiring harnesses, tack, horseshoes and horse drawn trailers.

A number of places allow serious violations in the procedures which this decree establishes for payments for agricultural products purchased from the population on a contract basis: livestock are purchased at prices exceeding established state purchase prices, causing sizable economic losses to kolkhozes and sovkhoses. Some farms attempt to enter into unhealthy competition with consumer cooperatives to establish prices for livestock purchases from the population. These cooperatives have been authorized to pay prices agreed upon by parties to the contracts. Such violations have become possible because of insufficient control on the part of agricultural organs over the proper observation of the decree's basic provisions. These state that prices in contracts for purchases from the population are set by contract, but do not exceed state purchase prices.

As is known, legislation provides that payments for livestock purchased from the public should be made through the enterprise or organization cashier's office or, at the citizen's request, through the transfer of the money to savings accounts. However, some farms, give procurers large sums of cash to pay for livestock purchases.

There are also cases where relations between public and private farms are not made on a compensation basis, but through the resources of kolkhozes and sovkhoses, costing them large additional outlays.

Standard contracts for the production and purchase of agricultural products set prices which should be the basis for economic relationships between public farms and private plots and which should be strictly observed in practical work. In order to avoid violations each kolkhoz and sovkhos should, based on the decree and standard contracts, work out proper economic relationships with citizens' private plots, which most completely meet both parties' interests.

Experience in the first three years of work on the basis of principles laid out in standard contracts is evidence that for the most part they meet both parties' interests and properly regulate their organizational and economic relationships in agricultural production cooperation. On the one hand the basic directions for these relationships assist in establishing a nationally unified procedure for setting and applying prices for services, feeds, construction materials, etc. supplied to the population by agricultural enterprises. In addition, this creates the basis for a system of technological, organizational and economic relations between private plots, kolkhozes and sovkhoses. On the other hand, the standard contracts give extensive rights to farms, which, on the basis of approved regulations, can and should set specific prices for types of services to private plots, grounded on each farm's economic potentials and conditions. For example, the standard contract states that kolkhozes and sovkhoses can sell feed they have produced to the public at its planned prime cost. This means that prices at each farm will be different, depending upon economic conditions at each specific farm.

The obligations which farms have assumed in concluding contracts for the purchase of animals from private plots involve definite costs (for raising young animals, reception and transportation, feed preparation, etc.). However, with skilled and rational organization, these costs can be recovered through additional earnings obtained by farms from sales to the state above the levels attained in the preceding five years, and from obtaining heavier cattle.

A number of union republics place great importance upon raising heavy cattle on private plots. In 1982 in the LiSS the average live weight per head of cattle purchased on contracts with private plots was 401 kg, and for swine the figure was 113 kg. The republic's farms obtain sizable returns from selling the state such heavy livestock purchased from the population. For example, last year the Pokupis Kolkhoz in Kupishskiy Rayon purchased 157 young cattle from the population. The average live weight per head was 417 kg. The kolkhoz received 17,700 rubles (in the form of markups on prices for livestock in good condition) for selling these cattle to the state.

However, existing legislation does not now make provisions for paying citizens markups on prices for heavy livestock purchased from them by kolkhozes and sovkhoses on a contract basis. The enhanced material interest of the population in the contract raising of heavy weight livestock is of great importance in increasing beef production and strengthening the economies of public and private farms. It is no accident in this regard that proposals are coming from the countryside to pay citizens part of the markups on heavy livestock raised on private plots and sold on contract to kolkhozes and sovkhoses. It is our view that a positive solution to this problem would assist in increasing meat production and in improving its quality.

The USSR Ministry of Agriculture receives letters which report that some citizens are attempting to use farmstead plots for personal enrichment and easy profits. This reduces their labor participation in social production, while the incomes obtained do not correspond to labor outlays. One should note that Article 13 of the USSR Constitution states that citizens can use parcels of land granted for conducting subsidiary operations. This means that by their very nature, such operations have a subsidiary, auxiliary character and should not serve as a main source of income. In accordance with Article 11 of the "Basic Land Legislation of the USSR and the Union Republics", land users have the right and obligation to use land parcels for those purposes for which they were granted. Improperly used land can be taken away from those who allow systematic violations of its use. It is therefore essential to ensure that kolkhozes, sovkhoses and land use services exercise reliable control over the proper use of farmstead land parcels.

In letters sent to agricultural organs and the editors of newspapers and journals, workers also report citizens living in the countryside who, making use of benefits granted them, have reduced or completely curtailed work in public production and have switched over to private entrepreneurial activities in the individual sector. In such cases citizens' incomes from such activities often considerably exceed their basic earnings. It is very important here to strictly observe the decree's provisions, which state that kolkhozes and sovkhoses are to conclude agricultural production contracts with for private plot output with those kolkhoz farmers, workers, employees and other citizens who live on their territory and who conscientiously participate in public production. This

condition's observation is one of the most important tools for strengthening labor discipline on kolkhozes, sovkhoses and other enterprises and an effective means for regulating the activities of the working population.

As is known, the decree does not restrict the number of livestock raised on private plots on the basis of contracts with kolkhozes, sovkhoses and other agricultural enterprises, or contracts with consumer cooperative organizations. The number of livestock can exceed the established norms. However, the conduct of private subsidiary operations should in no way have a negative effect upon work at farms and other state and cooperative enterprises and organizations. It is therefore very important to enlist all labor resources into agricultural production, in order to combine the public production work of family members so capable with the successful conduct of private subsidiary operations. It is necessary here to have a voluntary, individual approach to each family, keeping in mind the enlistment of pensioners and students into subsidiary operations.

Work on farmstead plots and care for domestic animals gives the younger generation working habits, promotes a responsible attitude towards the land and a knowledge of the joys of creativity. Private operations are also a form of extending the working activities of millions of pensioners. Whatever work they are capable of doing helps them to view themselves as members of society, performing useful, social and state work. In this regard, those who attempt to explain the existence of private operations at the contemporary stage as only due to the necessity of increasing the nation's food resources are wrong. They forget that even with sufficient agricultural production, the importance of becoming accustomed to labor on the land should in no way weaken.

At many kolkhozes in the UkSSR there is a widespread practice of unjustifiably granting citizens person-days and earnings for the contract raising, on private plots, of livestock which are paid for at state purchase prices. Such payments amounted to 15,500 rubles at the Kolkhoz imeni Zhdanov in Brodovskiy Rayon, Lvov Oblast in 1982. These activities contradict the instructions on the labor conditions of out-workers [nadomniki] in agriculture, which were approved by the USSR Ministry of Agriculture upon agreement with the Central Committee of the Agricultural Workers' Trade Union (on 1 June 1982).

In accordance with these instructions, labor contracts for agricultural production at home are not signed with individuals having contracts with enterprises to raise and sell livestock and to sell surplus milk from private operations under conditions of the CPSU Central Committee and USSR Council of Ministers decree of 1 January 1981. This decree provides that output be paid for at prices set by contract, but which are not higher than state purchase prices. Output produced by out-workers under labor contract is the property of the enterprise and payment to the out-worker cannot be made at contract or state purchase prices.

It is improper to add the labor expended for raising livestock on private plots which is paid for at state purchase prices to labor in social production and to grant additional earnings because citizens not participating in the

formation of public consumption funds then make use of them. Moreover, people would be paid twice for raising livestock, as the state purchase prices include the value of labor expended in raising livestock. In practice this can lead to some categories of workers having a reduced incentive to actively participate in social production at kolkhozes and sovkhoses, since labor on private plots will be equal to social labor, and even have greater incentives.

There are cases where sovkhoses provide incentives to citizens raising animals on contract from the material incentives fund, formed from deductions from profits obtained in social production. It should be noted that resources from the material incentives fund are intended for premiums to sovkhos workers for attaining high indicators in public production. The use of this fund's resources to provide incentives to citizens for selling livestock to the sovkhos at state purchase prices is not intended by the decree, since earnings from selling the livestock are, as a rule, completely recovered by these citizens.

There is also the question of the sales of residences located in rural areas and the transfer of the right to use farmstead land to people living in cities. According to civil law, residences which are the private property of citizens can be the object of purchase and sale. However, the transfer of property rights to a residence in a rural area does not entail the transfer of the right to use the land parcel. On the basis of existing legislation, the use of farmstead land parcels can only be granted to citizens living in rural localities.

It should concurrently be noted that this decree entrusts the Councils of Ministers of the union republics to temporarily grant enterprises, organizations, institutions land parcels from unutilized land of industrial, transportation and other non-agricultural enterprises and organization and unused land within the boundaries of cities and other populated points. These parcels are to be used for raising potatoes and vegetables. They are granted in the established manner and during the time of this grant will not be used for their prior purpose.

There are also reports that some managers of kolkhozes and sovkhoses violate the degree's voluntary principles in signing contracts for raising and selling livestock, allowing instances of administrativism in this matter. The replacement of strictly voluntary principles by administrative measures undermines the population's incentive to raise animals.

The decree stresses that livestock maintained on private subsidiary plots within the limits of norms set by kolkhoz charters and existing legislation are to be used, at the discretion of the owners, for satisfying their own needs, sold to consumer cooperative organizations at contracted prices or at markets or to state procurement organizations.

As experience shows, private subsidiary plots can successfully develop only on the basis and with the help of public production. Therefore, the improvement of practical matters at each kolkhoz and sovkhos and improvements in their economies are the main conditions for increasing agricultural production in the individual sector. This can be attained only with the most active labor participation in public production by all citizens.

Of course, the problem of developing private, subsidiary operations is very large and complex. It requires a systematic approach, a comprehensive solution to all problems and a concentration of ministry and department efforts. There should also be work by agricultural science, which should have broader research on the problems of private operations, with consideration given to regional specialization and the specific natural-economic conditions of each zone in the nation.

Undoubtedly, everything which has been done is only the beginning of the great work which must be completed in light of the CPSU Central Committee and USSR Council of Ministers Decree: "On Additional Measures to Increase the Production of Agricultural Products on Citizens' Private Subsidiary Plots". In addition to measures for assisting the population in strengthening the material--production base, it is also necessary to create a general social climate in which kolkhoz farmers, workers, employees and other citizens will feel that in raising animals on private plots and engaging in gardening and orchard work, they are involved in a useful state concern..

It is the task of agricultural organs, kolkhozes and sovkhoses to completely use all potentials for increasing agricultural production on citizens' private plots.

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PROCUREMENT OF MOLDAVIAN PRIVATE PLOT PRODUCTION BY COOPERATIVES

Kishinev SEL'SKOYE KHOZYAYSTVO MOLDAVII in Russian No 10, Oct 83  
pp 19 - 22

/Article by D. Viktorov, correspondent: "The Private Plot - An Advantage for Everyone"/

/Text/ Last year the cooperative organizations of the Moldavian SSR procured nearly 11,000 tons of meat and 166,000 chickens, more than 1,700,000 rabbit skins and 377,000 astrakhans, 2,800 tons of dairy products, more than 200,000 centners of vegetables and fruits, nearly 1,000 tons of honey, up to 7,000 tons of potatoes, almost five million eggs, and many other products, which were purchased for contracted prices. The total amount of the agricultural procurements by the cooperative organizations in the second year of the current five-year plan came to almost 36 million rubles. This year the procurement officials pledged to attain a goods turnover of as much as 36,600,000 rubles; and by the end of the five-year plan it will exceed 40 million rubles. The assortment of procurements will expand significantly.

This conversation took place in the foyer of the Chimishliya Rayon House of Culture. During a break in the republic seminar-conference of the workers and procurement officials of the regional organizations of Moldavpotrebsoyuz /Moldavian SSR Union of Consumers' Cooperatives/ the participants in the session continued their discussion of matters that are of concern. They began to remember the managers of the leading procurement offices. This led to the mention of the name A.L. Shnayderman.

One of the speakers said that " Shnayderman is a most soft-spoken and sensitive man."

Another protested, "What are you saying? He has the technique of an armor-piercing shell! He knows where every cooperative kopeck goes."

A third added, "I think you are both correct."

This was the first time that I heard the name Aleksandr Lvovich Shnayderman, the director of the Novoanenskiy Rayon Procurement Office. And I entered his name in my notebook. Over a period of time more and more information about this man was entered in my notebook. I saw him once at a local meat combine. As he explained, there was a particular need for this - during the "rabbit peak" days the enterprise did not keep up with the processing of the special diet meat that had been procured by the cooperatives; and this had hindered the smooth operation of the procurement office. There was an urgent need to obtain mixed feed in Kishinev and to augment the assortment of goods in increased demand for counter trade and Aleksandr Lvovich made a trip to the procurement administration of Moldavpotrebsoyuz. He admitted that he does not like these business trips. But, it seems, that they cannot get by without them.

His procurement office is one of the best in the Moldavian SSR. It services 26 villages. Last year the procurement plan for this office was fulfilled by 153 percent. This means that the owners of private plots had sold 400,000 rubles worth of excess agricultural products in excess of the plan. The assortment of the products procured was expanded significantly.

The high work results make local procurement officials happy. We wanted to find out the main reasons for the successes of the Novoanenskiy Rayon cooperatives.

In past years, lacking adequate space for commerce, the raypo /regional consumers' society/ was compelled to rent space in the stores of the state trade system. Now the need to do this has fallen off - they have built their own commercial spaces. And at the acceptance-procurement points they have built stores for counter trade.

I.S. Nutsa, the rayon procurement official, explains the arithmetic of the profit picture, "veal purchased from the private sector costs us three rubles and 40 copecks per kilogram. Pork costs two rubles and 90 copecks per kilogram. Until the slaughter shop was completed, cattle were slaughtered some 20 kilometers from the place where the meat was processed. The by-products such as blood and skin were lost. The delivery and long storage of meat products in deep freezers also resulted in unavoidable losses."

Ivan Stepanovich Nutsa told us that according to estimates of the economic analysis service by just eliminating these production costs it was possible to realize additional profit. The net profit of the procurement office over the past two years has exceed the planned profit by 1.5 percent. The percentage of the deductions for the incentive for the outstanding producers of agricultural products has also risen.

Thus the principle of self-paying is turning into an expansion of the system of measures for motivating the owners of private plots. Now when concluding contracts with them they are given small cash

advances for raising cattle, buying feed and for other farming needs.

We travel to the village of Merena with procurement officials S.V. Semeryakov and N.I. Gore.

There were a lot of people at the acceptance-procurement point on this day. The girls, without hiding their joy, acquired new dresses. The men talked about the prices for astrakhans and shared their experience in raising rabbits and nutria. Nearby at the table of the acceptance official, the private farmers received coupons for furs and rugs, boots and sheepskin coats. An elderly farm worker, having removed a bag just filled with feed from the scales, puts the bag into the sidecar of his motorcycle. I go up to him and introduce myself. He is a veteran from the kolkhoz. His name is Luka Profirovich Koypan and he is retired. But age is no hindrance to work. Only now he works on his own private plot; he does not have the energy to work full time on the kolkhoz.

"My wife and I for the past one and a half years have been raising a dozen sheep and more than 40 rabbits. We also have some pigs and chickens. And we have a good increase in our livestock," reports Luka Profirovich.

"Last year," he continues, "I handed over to the cooperative four pigs with a total live weight of nearly 600 kilograms, eight astrakhan furs, and 20 rabbit skins. For this excess agricultural products, in addition to the money, I receive mixed feed and they sell us consumer goods that are in great demand."

P.G. Kretsu, a kolkhoz field crop specialist, enters the conversation, "Of course selling produce grown on a private plot may be somewhat more expensive in the open market. Only many people no longer want to waste days waiting for a buyer. Particularly when at the procurement office they allocate to me a grid and slate and other materials for building and repairing rabbit hutches; and they help out with the feed."

Yes, it is livestock feed that is largely responsible for the success of this endeavor. The executive committee of the Merena Rural Soviet and the administration of the kolkhoz devote a great deal of attention not only to the development of such private farms but also to providing them with feed. They see things this way: a farmyard without animals is like a house without a roof or a tree without roots.

It is clear that the private plots cannot fully meet the needs of livestock for feed. The farm managers understand this and know that feed comes from the kolkhoz fields for the most part. In the spring as soon as the grass starts to grow, the executive committee of the Rural Soviet sponsors a meeting of citizens, at which the pastures are chosen. They pasture the livestock of the private farmers in meadows set aside by the kolkhoz administration. And for the winter

the kolkhoz allocates feed for the privately-owned cattle, being governed by the principle of the labor participation of the family in kolkhoz production.

This is how things are done in many rayons of the Moldavian SSR. The experience of the Novoanenskiy Rayon farmers has been spread extensively. In the village of Pervomaysk in Drokiyevskiy Rayon, for example, in order to do a better job of providing the residents of the village with feed the kolkhoz every year sows annual grasses on about 200 hectares of fallow land. Grain fodder is sold at the purchase price and on the same principle of labor participation. This explains the high results.

The cooperative officials actively depend upon the help of the local soviets in their work. This past spring I managed to visit the village of Opach in Kaushanskiy Rayon at a gathering of the owners of private farms. More than 1,200 contracts-agreements were concluded at the gathering for selling the surplus agricultural products to the cooperative. At the gathering the rural procurement officials and the executive committee of the Rural Soviet selected from the ranks of the aktiv the representatives, who were made responsible for 20 private farms each. They help the landowners to correctly determine which crops to raise and which kinds of livestock they should keep. When the work is organized in this manner the results are always impressive.

P.V. Kinzher, an official from the rayon procurement office which serves the villages of Zaim and Salkutse, expresses distress that, "unfortunately, there are farms which plant only grapes or flowers. As they say, these farmers have their own ideas."

This is precisely the case. For some the entire harvest is turned into wine; and for others the flowers go to the same market, where they are sold at inflated prices. Of course, for themselves they receive an advantage in the one and in the other case they receive very little; but the state is clearly the loser when private farming is performed in this manner. Do we truly have the right to forget that the land which is set aside for private use also belongs to the state? And that the state should not end up in debt from its use? Here, I believe, the administrations of the kolkhozes and the executive committees of the rural soviets must just declare that they will strictly monitor to insure that the holdings of land are used as they should be and that no family pursues mercenary goals to the extent that in seeking the "long ruble" they forget about everything else.

It is well known that the counter of a cooperative store is a mirror of a cooperative union's work. To set up a brisk trade in fresh vegetables - right out of the garden - is half of the business. The other half is the well-planned storage of tens of thousands of tons of products for a long period of time. A significant

portion of the produce must be pickled and marinated, fermented, dried or canned.

"Everything that is grown must be stored!" This is the topical appeal of the peoples' deputies from Saratov Oblast, which the cooperative officials in Moldavia have readily embraced. This effort is being implemented with great difficulties.

Let us turn to figures. The Vulkaneshtskiy, Dondyushanskiy, Dubossarskiy, Kamenskiy, Nisporenskiy and several other rayon procurement offices fulfilled last year's plan for storing potatoes and vegetables for the winter by less than 50 percent. For the managers of these cooperative organizations the state plan has not yet become the law. Under the same production conditions the Kotovski, Oknitskiy, Strashenskiy, Orgeyevskiy, Ryshkanskiy, Sorokskiy, and the majority of the other rayon procurement offices significantly overfulfilled their plans for the winter storage of potatoes, onions, carrots, beets, sauerkraut, pickles and other vegetable products. In these and many other rayons of the Moldavian SSR the cooperative officials have something to offer to the tables of the workers of the cities and villages. They have not only fruits and vegetables, but also canned goods, veal, lard, sausage and rabbits. The local self-supporting trade and buying enterprises have combined the purchase of agricultural produce from the kolkhoses, sovkholes and the private farmers and the sale of these products to city residents into a unified whole. In being able to buy and sell at lower prices, the cooperative officials of the leading procurement offices have a real influence on market prices. It is not an accident that the products at the Brichanskiy, Lazovski and Yedinetskiy and Oknitskiy markets are almost 20 percent cheaper than at markets in nearby rayons.

Objective difficulties do, of course, exist in connection with the safe storage of the products that are procured for winter storage. But it is clearly poor management and the lack of the proper attitude toward the task that are responsible for the excessive losses of livestock products and vegetables at storage facilities in Grigoriopolsky rayon procurement office amounting to 3,500 rubles, at the Dubossarskiy - 3,650 rubles, and at the Kalarashskiy office - almost 1,600 rubles.

I was recently in Yedintsy. Here the cooperative officials are introducing variety to the assortment of food products. They are augmenting the meat and meat products by means of the subsidiary farm that they have developed at the procurement office. They have for a long time taken a very serious attitude toward the feeding of livestock. And the weight gains are constantly going up.

Of course, the subsidiary farm, where there are 250 pigs, has added work and concerns for the office. It should be said that a lot of

what is being done is the result of the initiative of Sh. P. Goldenshteyn, a resourceful manager, who knows the value of money. While the farm has land at its disposal, more than 50 percent of the feed given to the livestock is in the form of food wastes. Concentrates are used in small amounts; without concentrates one cannot maintain the breeding stock. The food wastes are collected from the citizens, at enterprises of the meat and dairy industry, and at public dining facilities. Due to this approach last year some 300 centners in weight gain were achieved against a plan calling for 135 centners. The average 24-hour weight increase came to 420 grams, which is almost double the amount for the republic on the whole.

Yedinetskiy Rayon is not an isolated example. More than 1,000 hogs are being fed in Kaushanskiy, Leovski and Kagulski rayons. An increasing number of Moldavian SSR cooperative organizations is engaged in feeding livestock. Their output is reliable. More than 150 tons of additional veal and pork and rabbit and poultry meat are reaching the counters of stores and public dining facilities in excess of what is purchased.

The cooperative officials expect a lot of help from the local organs. In particular, they still have not been given enough land for agricultural pursuits; and what they do have requires reclamation and other work. There is a great need for specialized transport to haul and collect food wastes.

The transportation problem is especially crucial to the cooperative officials. Moldavpotreboysuz has only five special vehicles for transporting skins and hides! It is true that since the start of this year the rural procurement officials have been given motorcycles with sidecars. This will make it possible to broaden the practice of procuring products directly at the home of the rural resident. However, the problem of delivering the raw materials and food products from the acceptance-procurement points to the warehouses of the rayon cooperative unions remains unsolved.

Other problems having to do with the development of private plots also remain unsolved. The feed problem is the crucial question. On the outskirts of a village one often encounters this scene: on the rocky slopes, in gulleys cut up with ravines, on hills and other land that is difficult to access, as well as along the sides of roads, the owners of private farms cut grass and make hay. This work can in no way be viewed as easy.

A gasoline-powered mower would be of inestimable value in such work. The need for a gasoline-powered tiller, electric water pump, small tractor and other small farming equipment is very great. All of this is greatly needed for farming small private plots and for the procurement and preparation of feed. It is needed, but it continues to be a rosy, unattainable dream. Why? By the way, within the

Moldavpotrebsoyuz organization and at the Moldavian SSR Exhibition of the Achievements of the National Economy, where I asked for information, I received an exhaustive reply that was not very promising for the owners of private plots. It turns out that within the Moldavian SSR no automated gardening and orchard tending equipment is manufactured. Very little such equipment is manufactured anywhere in the USSR, when one considers the demand for it. Therefore this problem remains one of the most crucial.

The successes in the development and expansion of private plots could be greater if there were not individual miscalculations in the very organization of procurements and in the system of making estimates with the suppliers.

A kolkhoz worker from the village of Ketrosa in Drokiyevskiy Rayon, Yefim Georiyevich Zuzu, says, "every year I hand over to the procurement office of the rayon cooperative union as many as 250 rabbit skins and about ten astrakhan furs. And only now are they beginning to accept products at five o'clock in the morning. It is difficult to go to the office at this early hour and sometimes there is nothing to make a deal with. You leave your products there and then two or three days later you have to return to pick up your money. This is not the way to do business. We lose a lot of time and effort in this. The calculations should be done while I am there and right away."

Yefin Georgiyevich is right: each such wasted work day, particularly in a busy period, is costly to the man and to the kolkhoz. What good is this excess red-tape?

These and other problems have come to the surface as I became more acquainted with the current status of the private farms within the Moldavian SSR. What is being done to render assistance to the kolkhoz workers in enlarging and strengthening their private plots? What are the prospects for increasing the procurements of surplus agricultural products? I asked these questions of Ilya Dmitriyevich Bodur, the deputy chairman of Moldavpotrebsoyuz.

He said, "in the third year of the five-year plan we will purchase from the kolkhoz workers nearly 112,000 centners of meat and 200,000 chickens, up to 30,000 centners of vegetable oil and 22,000 centners of dairy products, 105,000 centners of potatoes, and quite a lot of vegetables and fruits, melons, honey and medicinal grasses. And all of these products will be purchased through the consumers' cooperative organization. Reserves? We see reserves in activating individual work with the owners of private farms and in developing measures to motivate them. While last year some 170,000 private farms served as our suppliers, this year contracts will be concluded with not less than 180,000 owners of private plots. They will be sold mixed feed, gardening and orchard-tending equipment, seeds and

fertilizer at very lucrative prices. The total value of these goods is four million rubles.

After all, what has been said is correct: the private farm is advantageous to everyone.

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SYSTEM FOR SALE OF SURPLUS PRODUCTION TO COOPERATIVES FAULTED

Moscow SEL'SKAYA ZHIZN' in Russian 4 Dec 83 p 2

[Article by Vladilen Shul'gin: "Both For Oneself and For People"]

[Text] "Potatoes thrived in my garden last year" wrote pensioner P. Pereverzev from Krasnovisherskiy Rayon in Perm Oblast, in a letter addressed to the Editorial Board of SEL'SKAYA ZHIZN', "I could have sold several quintals to the state but for the fact that the procurement office I had appealed to for assistance had already fulfilled its plan for purchases. They promised me that they would accept the products in the spring. But again in the spring I was unable to sell the tubers. During the summer, upon arriving at the oblast center, I noted with some surprise that the stores were not trading in potatoes. It was a strange situation: we had no knowledge as to how to market our surplus products and yet the city-dwellers were having to purchase their potatoes at a market at almost 1 ruble per kilogram."

This was a typical and extremely alarming letter. Nor was it the only one of its nature received in the Editorial Board's mail.

For the sake of fairness it should be stated that in recent years the cooperation specialists have increased their procurement activities. Over a period of 5 years, the purchases of surplus products from private plots have increased by a factor of more than 1.5. During this current five-year period, Tsentrosoyuz [USSR Central Union of Consumers' Societies] must purchase from the rural population 19 million tons of potatoes, 9.5 million tons of vegetables and 5.2 million tons of meat. Overall, the country's consumer cooperation system must place in circulation almost 12 billion rubles worth of food products.

These figures are reliable, the successes beyond question and still letters similar to the one quoted above continue to be received. Why is it that the cooperation and procurement specialists do not seem to reach each peasant desiring to market the surplus products of his garden?

One of the chief shortcomings in this work, as noted quite properly by reader Pereverzev, is the absence of good planning by those cooperation specialists responsible for purchasing and marketing the products. In any endeavor, a great deal depends upon planning figures. If a task is realistic and at the same time tense, then the personnel responsible for carrying it out perform at

maximum capability. But what can be said regarding a task assigned to Estonian cooperation specialists for purchasing meat that is lower by a factor of 1.5 than the actual procurements for the previous year? Can the cooperation specialists in the Maritime Kray and in Kemerovo, Kaliningrad, Kirov, Novosibirsk and a number of other oblasts and krays be stimulated by plans for purchasing dairy products during the first 6 months, if these plans have been overfulfilled by several times?

"At times, it is offensive almost to tears" writes reader A. Zagarskikh from the village of Petrova in Kirov Oblast, "when you see the village's residents using valuable food products in a wasteful manner. And I myself saw housewives feeding pails filled with milk to young pigs. And what is to be done? The village is in a remote location, with the nearest procurement point dozens of kilometers distant..."

It is obvious that responsibility for purchasing milk from the population must be borne not only by the cooperation specialists, but mainly by the dairy industry and the kolkhozes and sovkhozes. Moreover, importance is attached to ensuring that the local party and soviet organs provide assistance in combining the efforts of the procurement specialists from all departments, such that a rural resident will not have to beg somebody to purchase his surplus potatoes, milk or meat.

In particular, such situations develop quite often in remote areas, where acceptance points are lacking. Indeed, up until now, as reported to us by Tsentrosoyuz, there is only one acceptance point for every two village soviets throughout the system as a whole. Certainly, this is not the situation in all areas. Whereas in the Ukraine there are two primary acceptance points for every sel'sovet /village soviet/, in Belorussia there is only one point for every eight soviets, in Kazakhstan -- one for 10 and in Azerbaijan -- one for every 22. At the same time, the tasks for building these installations are not being fulfilled. Over a period of two and a half years, the Belorussian cooperation specialists failed to place in operation more than 100 acceptance-procurement points and the Kazakh cooperation specialists -- not more than 250.

Certainly, the problem is not limited to just a shortage of facilities. Here a tremendous role is played by the procurement specialists themselves. "Proper respect is not being shown for our profession" complain many representatives of the cooperative system of procurements, "Yes and not enough importance is being attached to providing incentives for our work." Actually, the work performed by a cooperative procurement specialist is difficult and involves considerable traveling. It would seem that a requirement exists here for linking his wages to the final results as closely as possible and also for awarding bonuses to the best workers using special cooperative withholdings. But here is an interesting fact: it turns out that in all of the potrebsoyuzes /union of consumers' societies/ without exception, even the available resources are not being utilized as intended. Last year, for Tsentrosoyuz as a whole, 3 million rubles were accumulated for awarding incentives to procurement workers and yet only 1 million rubles were expended for this purpose. The potrebsoyuzes of Russia, after contributing 2.2 million rubles to the incentive fund, expended only 0.6 million rubles.

The time is obviously at hand for raising the level of economic work in consumer cooperation and for using modern methods of economic analysis. Here the Tsentrosoyuz system appears to be falling behind. Many of its instructions on procuring surplus products from the population, selling them, issuing incentives to suppliers and on price formation have become obsolete and at times are in conflict with one another. The methods for carrying out planning work are less than perfect. Thus some regions are fulfilling their annual procurement plans in just 3-4 months, while others, in the interest of somehow "dragging out" the plan, must procure at least 1 pood of wool from each sheep on their private plots.

Meanwhile, a great deal can be achieved through the correct organization of cooperative work in the procurements of surplus products produced on the private plots of the rural population. Similar to counter deliveries of required goods, all of this will make it possible for each rural family, within its capability, to participate in the work of solving the food problem. Everything that becomes available in the peasant yards must be purchased in a timely manner so as to produce profit for the rural families and overall benefits for society.

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## FORESTRY AND TIMBER

### RESOURCES MATTER OF CONCERN IN KARELIAN TIMBER INDUSTRY

Moscow PRAVDA in Russian 4 Jul 83 p 2

[Article by V. Kiryasov and V. Litvinov, Karelian ASSR: "The Forests of Karelia: Efficient Management"]

[Text] When 40 years ago the war ended on Soviet soil a great deal of timber was needed to restore the national economy and the cities and villages destroyed by the Fascists. There was sufficient timber in the north of the European part of the country. But it was most accessible in Karelia. The supplies of timber from the autonomous republic increased at a rapid pace.

Industry for the processing of timber developed rapidly as well. A network of modern sawmill plants grew up. Since the late 1940's the largest house-building combine in the country has been in operation here, supplying tens of thousands of wooden cottages for the village each year. Being introduced are capacities for the production of cellulose, plywood, wallpaper, furniture, sports articles and consumer goods. Gigantic paper combines are being built in Segezhe and Kondopog. They use over 40 percent of the timber procured in the republic. In other words, a multi-branch timber complex has developed in Karelia. It is involved in over half of the industrial production in the region.

However, not everything is going well here. On the one hand the republic is supplying timber in large quantities; on the other it is beginning to import cellulose and spruce pulpwood for the paper industry and wooden fiber slabs for the furniture industry.

Its own raw materials resources are noticeably exhausted. The bases for constant use of timber have been violated--such is the conclusion drawn by specialists. Instead of 8-10 million cubic meters in the republic over 12 million are procured annually. Is this good management?

Let's look at least at this fact. USSR Gosplan provides quotas for Karelian timber procurers without considering the structure of the calculated timber felling. This forces workers to cut down the more valuable spruce and pine stands, leaving untouched the non-commercial and deciduous types of trees. Each year over 1.5 million cubic meters of birches and aspen are left. They must be compensated for by softwood. This means that the reserves of spruce and pine are "melting" more rapidly.

According to the intensity of computed timber clearing, the Karelian ASSR finds itself in an unfavorable position in comparison with a number of other oblasts. There are considerable shortcomings not only in the use of forests and the distribution of procurement but in the planning of the sale of timber as well. We are speaking of the continuing export of round timber outside the republic while at the same time the timber-processing and paper enterprises here are experiencing a shortage of raw materials.

The chairman of the USSR State Committee on the Timber Industry, G. Vorob'yev, has said more than once that in Karelia no more timber should be cut than indicated by computations of timber clearing. One of us discussed this question with the minister of the timber, cellulose-paper and timber-processing industry, M. Busygin. He was even more specific.

"In Karelia we have been forced to go to the same places three times in some areas."

What is the answer to this problem? How can we secure the constant use of timber and the uninterrupted supply of timber in the required amount to timber-processing and paper enterprises? First of all, specialists confirm, we must curtail computed timber clearing for primary use with a consideration of fully satisfying the needs of consumers for 50-60 years into the future. This will enable us to preserve the raw-materials base to a certain degree and to avoid the mass import of pulpwood and wood chips from other areas of the country.

We feel that it is time for planning organs to finally listen to the voices of specialists and scientists and to bring the type and commercial structure of timber procurement in Karelia in accordance with the existing structure of computed timber clearing. It is also essential to organize things in such a way that local enterprises process timber efficiently and in full volume. This will yield a significant economic effect and losses of raw materials will fall sharply.

In Karelia the timber complex is acquiring more and more evident features. In order to accelerate its formation it is necessary to more rapidly solve the problems of scientifically-based timber utilization and of the thorough processing of timber close to its procurement areas.

Since the late 1960's the autonomous republic has had the goal of more fully and comprehensively utilizing timber. On plots of land and lower storehouses of timber industry enterprises and mechanized timber enterprises large knots of wood and other wastes are collected and then processed into industrial and hydrolysis chips. Shavings, and rods from timber-shaving enterprises are used. The production of industrial raw material from wastes to meet the needs of the paper industry already exceeds 1 million cubic meters.

Especially notable is the success of procurers from the Karellesprom [Karelian Timber Industry] association. In its enterprises there are 56 shops operating to produce industrial chips. This enables them to deliver

almost 50 cubic meters per 1,000 cubic meters of exported wood, or double that in neighboring areas. The yield of timber per 1 hectare of taiga has increased to 136 cubic meters.

In order to successfully deal with the problem of supplying raw materials to cellulose-paper combines Karelian scientists have elaborated a long-term program for the accelerated cultivation of timber. It foresees the complete assimilation of the timber felling fund, the efficient and comprehensive utilization of wood and various methods for replenishing spruce resources. Nevertheless, the absence of the necessary technology and the insignificant length of good transportation routes hinder real intermediate use of timber.

Scientists recommend that deciduous and spruce stands be replanted immediately. The time has come to begin cultivating softwood in stands. But this should not be done on a broad industrial scale since suitable soil for this does not exist everywhere, but on the basis of natural plantings. The forces of timber industry enterprises, timber plants, mechanized timber enterprises, wood chemistry plants and reclamation stations are still diffuse. There is no coordination in their actions. While often located in the same forest settlement, they have different plans and financial sources, they procure and prepare timber and restore the forest separately. They build parallel small lower storage facilities and shops for consumer goods, garages and facilities for producing industrial chips, household articles and consumer goods.

"There is a problem with the strip holding of lands," says the director of the Ladvinskiy Timber Industry Enterprise, V. Brovkin. "Nothing major can be built, there is enough money only for trifles. Create living and production conditions for people as you will."

Such complaints can be heard in other settlements as well.

Under present conditions in which each enterprise has its own production base it is difficult to use not only natural riches but technology as well, to restore forests in a timely manner and to achieve constancy in the use of timber stands.

In the interest of the state and of enterprises of the timber industry themselves it is evidently necessary to create complex production associations and to concentrate efforts and resources on solving important industrial and social problems. As of yet the directors of the USSR Ministry of the Timber, Cellulose-Paper and Timber Processing Industry, the USSR State Committee on the Timber Industry and several other central departments have not been able to come to an agreement amongst themselves concerning coordinating joint actions. Even in Kareliya there is no single united opinion. We discussed this with the directors of the Karellesprom and Karelleseksport [Karelian Timber Export] associations, Yu. Ivanov and N. Pershinyy and with the republic's minister of the timber industry, A. Belyatko. They are opposed to a unification of forces for various reasons. There is no clear line with regard to this problem in the oblast party committee and in the council of ministers of the autonomous republic.

Meanwhile in Karelia there are fewer and fewer untouched forests and the volume of felling is constantly decreasing. If measures are not taken, in 30-40 years local timber-processing and cellulose-paper enterprises will be left without a raw materials base.

The Karelian timber complex requires a more attentive attitude. The supply of many types of products for the national economy depends on its condition.

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PROBLEMS OF TIMBER PROCUREMENT MANAGEMENT IN FAR EAST

Moscow SOVETSKAYA ROSSIYA in Russian 14 Dec 83 p 2

[Article by M. Karpach, Khabarovsk Kray: "Insufficient Tree Fellings"]

[Text] In the Far East taiga, one often encounters mutilated undergrowth and scattered fragments of tree trunks intertwined with the roots of trees. One is tempted to assume that this is caused by a typhoon or cyclone. But nevertheless this scattering of wood is man-made.

Cubic meters of wood removed from a forest -- the chief indicator employed today for evaluating the work of timber procurement specialists. What type of plot remains thereafter -- is it neat or cluttered up -- this is of little concern to the specialists. In so-called "poor felling areas" the timber industry farms leave up to 10 percent of the healthy workable wood. There is also wood which although cut down is not transported out of the forest. On the whole, an enterprise which has an annual shipment volume for example of 100,000 cubic meters loses 50,000 cubic meters annually.

The timber procurement specialists offer a very simple explanation for this situation. The plan increases in scope. And the greater the volume of wood procurements, the fewer opportunities there are for displaying concern for the future status of the forest. However, nobody will grant permission to lower the production program. Is this a hopeless situation? No, there is a solution. Namely -- the use of brigade contracts.

The chief of the Planning Department of the Sovgavan Timber Industry Farm, V. Kostin, was the first to propose the use of the Zlobin method in the Far East. He carried out computations and offered justifications. Their essence amounted to the fact that a brigade is obligated to exploit a tree felling area, within a normative period, while observing all of the rules for forest utilization. Its obligation -- to cut down timber, to abide by the planned expenditures for labor and material resources, to remove all wood from the plots and to protect the undergrowth. A bonus is issued if the work is carried out on schedule. Additional incentives are issued if the work period is reduced in length or if a savings in resources is realized. But what happens is there is an over-expenditure or if the rules for forest utilization are violated? The collective must pay a fine. Moreover, it must do so from its own treasury. A contract must force a brigade to view the forest not as a pie for satisfying one's appetite completely, but rather as a material value to be used over an extended period of time.

The brigade headed by A. Kovalenko at the Sovgavan Timber Industry Farm undertook to test the new method in actual practice. It employed the Zlobin method throughout 1976 and it proved that it is possible to cut down the timber without violating the rules and, in the process, not to lower but rather to raise labor productivity. The collective increased its procurement volume by 20 percent and its output by almost 30 percent. Moreover, it realized an economy of 1,000 rubles in the use of spare parts, cable and fuel. True, there were some violations of the rules for forest utilization: it is not easy to break old habits. The fine amounted to 1,137 rubles. But even this could nonetheless be viewed as a forward step -- earlier the fines were 10 times larger.

The work of this leading collective served as an example for others. The experiment carried out at the Sovgavan Timber Industry Farm was approved by the ministry. It was recognized as the principal form for organizing labor in the branch. Today, 3,000 timber procurement brigades have already converted over to the contract method. But in the Far East this leading method is being employed for procuring only 23 percent of the wood -- two times less than the average for the branch. Within the Komsomol'skles and Nizhneamurles associations, there is not one brigade that is operating on the basis of this new method. And within the Lazovskles and Dal'drev associations -- only a few units. Meanwhile the Sovgavan Timber Industry Farm reversed its position and rejected the contract. Why is it that the initiators of the "forestry contract" adopted such a modest view?

"Very well, I will agree to the contract" stated the present director of the Sovgavan Timber Industry Farm V. Chekotov. And he mentions the preliminary conditions: first of all, order must be restored in the areas of supply, planning and administration. So long as this is lacking, it will be impossible to conclude an agreement with the brigade, since it invariably will be broken.

Is this reasonable? No. If proper order, such as the director hungered for, had reigned on the Far Eastern plots, the idea of introducing the Zlobin method would scarcely even have appeared here. The contract method was devised as a means primarily for combating mismanagement. It obviously reveals more clearly discrepancies which exist in the operational practice of the timber procurement enterprises. But at the same time it motivates the leaders and executive agents into accepting greater responsibility and it trains them to display initiative and to solve urgent problems themselves rather than transferring them over to others. Fortunately, this chief intent of the contract method is understood by many workers.

"We were warned not to expect an easy life" stated a brigade leader at the Ulikanskiy Timber Industry Farm S. Yankov, "And we did not expect one -- we relied on our own organizational ability, expertise and ingenuity. We assumed the burden and we have not overtaxed ourselves: this is the second five-year plan during which we have employed the contract method.

Why is it not this way in all areas? It is believed that the reason for the failures lies in a poorly thought out approach for introducing this leading form for organizing labor. After concluding agreements with brigades, many leaders of timber industry farms stopped at this point. They assumed that the principal task had been carried out and that the remainder would take care of

itself. But the remainder did not take care of itself. This resulted from the fact that a contract is not simply a form but rather a new stage in the development of economic relationships. In addition to a different type of work organization, it also required a different level of economic reflection.

"It turned out that our engineering services were not prepared for such a level" stated the chief of the Department of Labor and Wages of Dal'lesprom P. Sukhonosov, "the accounting for materials at many timber industry farms is not complete. Only limited resources are available for issuing incentives to brigades for having realized savings. The administrations of enterprises are not displaying sufficient responsibility with regard to disruptions in contractual obligations."

The problem is aggravated by the fact that the specialists are not interested from a material standpoint in providing the contractual brigades with effective assistance. At the Oborskiy Timber Industry Farm, for example, a typical instance of this nature was related to me. The workers had requested permission from their foreman to undertake measures aimed at conserving in the use of fuel. But the foreman objected in an indifferent manner: "It is my task to provide the fuel and everything else is left up to you: it is you and not me who will receive a bonus for achieving a savings in its use."

Could it be that not only the brigades but also the engineering personnel should be issued bonuses for the fulfillment of agreements?

This is another problem. Today it is more profitable for the timber procurement specialists to violate the requirements for forest preservation than to abide by them. One cuts down trees for "volume" purposes and minor fellings are not gathered up -- this results in a savings in time and in an increase in output of roughly 20 percent, for which an additional bonus of up to 40 percent of the piece-rate wage is issued. The fine for neglecting to clean up a plot is merely symbolic -- 5 rubles per hectare. But in order to clean one such hectare, a timber industry farm must spend 100 rubles. Thus it turns out that a brigade which works on the basis of a contract unwittingly becomes an obstacle in the chase for gross indicators.

And what about the party and professional trade union committees. To what degree do they participate in use of the contract method? I recall how one industrious group, created by the Party Bureau of the Sovgavan Timber Industry Farm for the purpose of providing support for a leading undertaking, performed in a very energetic manner. They organized training for the brigade leaders and foremen and they found the means for issuing material incentives to the specialists. But V. Kostin, the chief supporter and propagandist for the Zlobin method, was transferred to other work and shortly thereafter the industrious group broke up.

It was only recently that I learned that the party committee of the Oborskiy Timber Industry Farm had examined the contract question at one of its meetings. There was a strong reason for doing so. One particular brigade, for the third year now, was still striving to operate on the basis of the new method. It had no intention of abandoning its original goal, but there were many problems. I decided to question the workers regarding the results of this discussion.

"I have no knowledge in this regard" replied brigade leader V. Slavikovskiy, shrugging his shoulders, "I did not attend the meeting of the party committee."

There is good reason to believe that the secretary of the party committee and the leaders and engineers should visit the collectives directly. The question as to exactly what is inhibiting the use of contracts can be discussed directly and in a more interesting manner directly on the taiga plots.

It is unfortunate that in the Far East one still encounters excessively optimistic opinions regarding local resources. They maintain that our forests are rich and that we cannot cut down everything that is growing. Is this so? The Far East taiga is located mainly in mountains and thus the tree felling work is carried out for the most part in river valleys and on gentle slopes. The "selective" method causes serious harm to the ecological regime. The time is at hand for rejecting the extensive method for timber procurements. It has been estimated that wood procurements in the Far East can be increased by 20 percent without even touching the new tracts. We must learn how to manage the economy and for the sake of this goal we must apply ourselves seriously to the task of introducing the "forest contract" into operations.

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